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Emotions of Men

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Emotions of Men

by

FREDERICK H. LUND
Professor of Psychology
TEMPLE UNIVERSITY

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To

My Teacher and Friend

PROFESSOR HARRY L. HOLLINGWORTH

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PREFACE

MAN is a creature of the heart rather than of the head. He is moved by impulses which are not rational but emotional. The things he does and the things he seeks have little or nothing to do with reason. Reason functions, it is true, but not in determining ends or the things he finds good, but rather in determining the best means of attaining these.

It is the presentation of these facts which constitutes the main theme of this book. It has been the aim of the writer to give a direct and informal account of man's interests, and to show the measure in which his needs, wants, and cravings arise from an emotional and instinctive source. To the same source is traced life's meaning and value, its color and intensity, its worth and significance.

There has been no attempt to list or catalogue the emotions as in the case of earlier works dealing with this subject. Such analysis and classification is less significant and less interesting to the student and general reader than the matter of relating emotions to life itself. To the individual who is interested in the influence of emotions upon thought and conduct, upon belief and ideational preference, and upon the whole fabric of our social, political, and religious life, this book should prove suggestive, and, we hope, valuable.

Analysis of specific emotions is undertaken only in the case of those which hitherto have been largely neglected, and those with which the author is most familiar through personal research and investigation. This is true of the material presented in the chapters dealing with aesthetics, weeping, vicarious satisfaction, emotions in belief, and emotions in politics and national history.

FREDERICK H. LUND.

TEMPLE UNIVERSITY,
September, 1930.

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Emotions of Men

CHAPTER I

EMOTIONS AS OUR PRIME MOVERS

Of all creatures man is the most interesting. Of all subjects his nature and conduct are the most fascinating. If we have never realized this we have never stood apart, so to speak, and viewed the ways of man objectively. We have never disengaged ourselves from our common humanity and viewed man as we would another species; we have never really asked ourselves why man is as he is, why he prefers certain activities rather than others, why he considers one thing good, another bad, why he likes this, dislikes that.

Not that interest in these problems has been lacking. Speculation concerning them has always been one of man's chief interests. From the rude imaginings of the savage to the highly wrought philosophical systems, from the magic and symbols of the cave dweller to the complexities and conjurations of the theologian, we see the attempts of man to account for his existence, his interests, his likes and dislikes. In all of these myths, symbols, and projections there is, no doubt, some truth. But they are too largely a product of man's own mind. As mythical and speculative systems they are too apt to present life, *not* as it is, but as we would have it, not as we find it, but as we think it *ought* to be. Too clearly they reveal the prejudices that are man's. Only too forcefully they bring home to us that, being men ourselves, we have difficulty in taking an unbiased attitude toward the activities of men. When this is the case, when conceptual systems are evolved under ideal motives, we should see in them less a way of truth than a reflection of ourselves.

How hard man struggles to give importance to the things affecting his own existence! How insistent his demands for elevation of self and of human kind! This is as apparent in the life of the individual as in the life of the group and of the nation. And particularly is it apparent in the accounts dealing with the special interests of these. Biographies make of ordinary mortals heroes and demigods. National histories glorify the people who write them. Systems of philosophy and theology place man on a pedestal and give to him a place of special significance in the order of existence. As conceptual systems, as humanized products—written by men, for men—they appeal, they satisfy, because they meet the needs and demands natural to the individual.

For an answer to the questions which concern man's life and motives there can be little value, then, in turning to idealistic accounts. They are too apt to reflect the same prejudices, the same ideational preferences, which through the ages have confounded men, blinded them to reality and created opposition between ideal and scientific versions of existence, the same prejudices and ideational preferences which in the past have fermented wars, which have driven lovers of truth to death at the stake, which forced a Galileo into recanting statements of observed fact, impelled the weak and faint-hearted into seeking refuge in self-constructed illusions, forced us *all* into cultivating the ideal when the actual failed to satisfy.

In seeking an answer to our problem, in trying to determine the conditions which control man's life and direct his behavior, we are not going to follow the example of the idealist. We are not going to dress up facts because we can't bear to see them naked. Nor are we going to fix our eyes on the firmament in the hope there to discover the verities of existence. Facts cannot be drawn from the clouds or from thin air; not even the facts which most vitally concern us. Like everything else, the foundations of our being, of our nature and our conduct must be sought within some tangible sphere and in connection with their seat of expression, in this case, *in man himself.*

What then guides man's conduct? What determines his interests? Is there any one principle which more than any other is responsible for his life and behavior? We believe there is, but it is hardly to be found in the time-honored principle of human rationality. It is not reason, not intellect. These, as we shall see, are but the instruments, the servants, of the inner man. Nor is it some mysterious force, internal or external. More fundamental, more important than any or all of these, is the guiding and molding influence of man's emotions. It is these, or the satisfying states associated with them, that man seeks. Things *themselves* are not significant. The external world interests us only in so far as it satisfies, only in so far as it arouses in us agreeable emotional states. It is the production of these states that holds man's attention and directs his interests. It is pleasure, satisfaction, happiness, that man seeks—ultimately, a state of mind with pleasant emotional coloring.

It is in our capacity to experience emotions that life gains meaning and value. If we had no emotions, everything would seem indifferent. In fact, it is just so that the world appears to the individual who, through abnormality of the internal and glandular system, has lost all emotion, and who for this reason must be committed to institutional care. To such an individual nothing is significant, nothing seems to matter, not even life itself. His wife, his family, his loved ones, do not move him. He is not depressed, he is not in despair, he is merely non-emotional.

That things are able to stir us, move us, or inspire us, is only because they touch the inner fibers of feeling and desire; fibers which, like an internal sounding board, respond to every shift and change in experience, coloring our activities, some pleasantly, some unpleasantly, elevating our spirits, exciting us to passion, or arresting us to calm and quiescence.

The nature and origin of these affective and emotional states and the manner in which they direct and control our behavior will be clearer from a consideration of the physical and biological conditions with which they are associated. Of these conditions we shall learn more in later chapters.

But even in the ordinary walks of life and quite apart from their physical and biological significance the directing and controlling influence of the emotions must indeed be apparent. They express themselves in all our vital interests, in our social life as in our national life. Armaments and machines of war tell of our fears; organizations and institutions of mercy bespeak our sympathies and affections; monuments and memorials proclaim our love and admiration. The edifices and institutions of religion are eloquent symbols of our higher aspirations, of longings which the present order fails to satisfy. The same may be said of the entire field of art and literature, which very obviously is actuated by a desire to perpetuate experiences which we have found good but which in ordinary life are too fleeting, or, perhaps, entirely wanting.

Broadly speaking, the entire fabric of human life—whether social or economic, whether political or religious—is organized for but one purpose, that of satisfying urges and demands natural to man. The arts, the institutions, the special devices and contrivances called our culture—what are they but the medium through which man indulges his primary emotions? The *level* of cultural attainment—what is it but the extent to which man accomplishes this end scientifically and effectively? Civilization itself, as the servant of culture, must, indirectly, serve the same interests. Being a means and not an end, civilization is concerned with efficiency in material production. Its function is to increase the supply of life's necessities in order that more time may be left for the indulgence of the inner man and for the cultivation of things which exist in their own right and for their own sake.

WHAT GIVES LIFE ZEST?

If emotions are our prime movers, if they alone make life worth living, if life apart from them can be only boredom and monotony, then we need to know something about the conditions most capable of arousing and satisfying them. What are these conditions? What is it that provides for emotional stirrings? Is there a *technique of living* whereby life gains higher emotional value and intensity? There is, but not where we would expect to find it. It is not in a form of possession. It is less in *having* than in *wanting*. There is nothing in the world which we would really care about if it were ever and always easy to be had. For this reason, it is not strange that our keenest enjoyment is in some form of doing: in activity, in striving, in wanting.

The individual who finds life most dull and uninteresting is the one whose every need is provided for. He never enjoys life because he never *misses* anything, he is never given a chance to really *want*. He is without motive, without ambition. And how could it be otherwise? Ambitions are not stirred, aspirations are not kindled, unless there are desires, strong but unsatisfied, unless there are objects, alluring but out of reach, objects which beckon and tantalize by receding when we would embrace them.

In no case is this clearer than in the allurements of the love emotion. When are we most in love? When our love object seems all but unattainable, when we would have but cannot hold. When are we least in love? When nothing stirs our desires, when all is comfortably settled, when we repose in satisfaction, and what we have sought has become ours for the asking. Ardent love remains only so long as we do not rest too securely, only so long as we have not reached the settled everything-taken-for-granted stage. We may have, but not without effort.

We may hold, but not too securely. There must always be a margin of uncertainty and of further possibility.

Wanting is a relative thing, relative to the ease of getting. We may want wealth, distinction, eminence—but these, such as they are, would fail to satisfy if none coveted their possession. As students we may seek degrees, as teachers and ministers we may strive for merit and distinction, as business men we may be eager for wealth and independence. But when attained, degrees, wealth, and distinction mean less than they did before. The zest of living is not in having but in pursuing, not in avoiding difficulties but in meeting them. Enjoyment is in seeking, in wanting, in striving. It is keen according to the hazards and according to the possibilities for frustration and defeat.

ARE CONDITIONS OF MODERN LIFE ADAPTED TO OUR EMOTIONAL NEEDS?

Recognizing the truth of the preceding, we may wonder whether the conditions of modern life are really adapted to our emotional needs. Is it not possible that, in reducing life's hazards and abundantly supplying life's material needs, civilization has impoverished us emotionally? The life of our cave-dwelling ancestor was much more eventful than ours. After the hunt he knew what it was to enjoy a meal. He had time to think about it and to reflect on its worth. But what does modern man know of the struggles of the cave dweller? Of the vying forces which threatened his existence? What does he know of the fears and the heart throbs of primitive man? Of the courage with which he had to face the contingencies of death and uncertain existence? What does he know of the love that stirred that hairy bosom confronted daily with the possibilities of loss, privation, and extinction?

With all our refinement, with all our culture and civilization, are we not becoming emotionally anemic? The hot life of feeling and desire which characterized more virile existence is a thing of the past. It was still known in the days of chivalry. It had not yet lost its grip in the period of religious and political reform. It was yet very real to the pioneer and the frontiersman. But, today, with the protective barriers thrown up by civilization, much of this is gone. With the comforts of modern life, with the assurance of three square meals, of home and of family, existence has been decidedly reduced in color and intensive value. We cannot eliminate from life its risks and its hazards and still retain its virile qualities. For the thrills of real living we have substituted the emotional outlets of the novel and the theater. These hand-me-downs must take the place of real adventure and more genuine romance. We have no choice. The movie and the stage must satisfy, though they lack the edge, the warmth of actual contact. Why? Because civilization has adjudged them safer. We accept these secondhand experiences whether they have the real "kick" or not. But with it all, is there not some danger of our emotional life becoming senile and decadent?

The aim of civilization has been to remove from life its uncertainties. This it has achieved through greater knowledge of the environment and through control of natural forces. It has aimed at efficiency in material production and has achieved success through the introduction of machines and labor-saving devices. The result has been a feeling of security rarely enjoyed by so large a share of the world's people. But such efficiency and security have been realized at a cost which may seem greater than the value received. It has meant mechanization, not only in the sphere of material production, but in the life and habits of the individual. To secure the benefits of a machine age, we have had to adapt ourselves to machines, we have had to serve them in the same methodical fashion that they serve us. The work of the factory and the shop must stop and begin with the strike of the clock, must proceed through the day and through the year with the same precision, the same endless routine and deadly monotony. A life so thoroughly standardized, a set of habits so thoroughly mechanized, cannot help but produce a mind just as fixed in its ways.

In our struggle to eliminate uncertainties on the side of material requirements, in our desire for settled conditions, for peace, prosperity, and tranquillity, we are making huge sacrifices on the side of real living. With conditions standardized, with our thought and habits reduced to routine, with our physical needs all provided for, we have created an existence which tends to be rather dull and monotonous.

Standardized living means colorless living. It means a life without zest, without emotion, without adventure. We cannot live in a true sense if chance and hazard are eliminated or if eventualities are known and predetermined. If the price of peace and tranquillity, so much desired by the conservative, is a dull and unimaginative existence, then it would be better to have the results of non-conformity and rebellion. Not along the road of certain and uneventful existence has progress been achieved, but in the life that is venturesome and unafraid, unafraid of change, demanding the right to be different, to court innovation, to scale new heights, to climb new mountains, even though the quest and the climb are uncertain and dangerous. It is not the outcome that matters so much as the doing; not the trophy but the race; not the game but the chase.

There is, we may say, still an opportunity to secure all the thrills which belong to more genuine and eventful existence. We may still experience the fullness and richness of more venturesome living if we but have the spirit that is unafraid, the spirit that is willing to launch out from staid and conventionalized forms, spreading wide its sails, seeking new horizons and new opportunities in the fields of science, art, and industry.

MAN STILL A CREATURE OF EMOTION AND INSTINCT

In our discussion of conditions which provide for more effective living, we have strayed somewhat from our original problem, that of motivation. Our contention that human motives arise out of our emotional and instinctive nature does not square with the traditional account which makes Reason the guiding principle of man's conduct. Traditionally, there has been a tendency to exalt the rational side of man's nature, to regard him as a creature guided, not like the dumb brute by his instincts, but by the Light of Reason. This conception was first propounded by the Greeks. Later, it was accepted by the medieval philosopher who, working in the interests of the the all-powerful Church, made it the basis for an absolute distinction between Men and Animals.

This concept is not merely a case of idealizing man; it is attributable, quite as much, to our inability to view the ways of man objectively. Being men ourselves, we find nothing strange about our own behavior, while the behavior of animals may appear most unintelligible. But, as William James long since pointed out, our own activities seem logical and significant only because we are what we are. We may not be able to understand how the hen can find delight in the tedium of incubating its eggs. It may seem very strange that the bear should see in the she-bear so fascinating an object. But that the she-bear has this appeal is for precisely the same reason, to quote James,

> . . . that the youth should see in the maiden so beautiful a soul, clad in that *perfect* form, so palpably and flagrantly made from all eternity to be loved. And so probably does every animal feel about the particular things it tends to do in the presence of particular objects . . . To the lion it is the lioness which is made to be loved, to the bear the she-bear. To the broody hen the notion would probably seem monstrous that there could be a creature in the world to whom a nestful of eggs was not the utterly fascinating and precious and never-to-be-too-much-sat-upon object it is to her.
>
> Thus we may be sure that, however mysterious some animals' instincts may appear to us, our instincts will appear no less mysterious to them. And we may conclude that, to the animal which obeys it, every impulse and every step of every instinct shines with its own sufficient light, and seems the only eternally right and proper thing to do. It is done for its own sake exclusively. What voluptuous thrill may not shake a fly, when she at last discovers the only particular leaf, or carrion, or bit of dung, that out of all the world can stimulate her ovipositor to discharge. Does not the discharge then seem to her the only fitting thing? And need she care or know anything about the maggot and its food?[1]

[1] James, William, "Psychology," pp. 394–395, Henry Holt & Company, 1892.

The implications of these descriptive lines must be obvious. We fail to see our own life in the proper perspective because we view it with human eyes. We accept animal motivation as purely instinctive, our own as natural and rational, because we cannot view the matter objectively. If we could see ourselves, not as our own kind see us, but as beings of a different order might see us, we would realize with James that the rationality of our behavior is only *apparent*, not real. Our activities shine with their own sufficient light, seem the only eternally right and proper things to do, only because we are *men*. They seem rational, seem good—but good for what? For nothing, ultimately, except to satisfy the individuals engaging in them, or as a means of satisfying others. Should humanity be wiped out tomorrow, it could be no loss, no gain, unless it were the loss or gain of another variety of being.

If we are rational creatures, it is not in the fact of our wants, our needs, or our interests. These are purely instinctive and emotional. They arise out of inner nature, a nature determined by heredity. We are intelligent beings, not in what we want, not in our desire to live, nor in our desire for happiness, for friendship, love, or sympathy, but in the effectiveness with which we satisfy these desires. The desires themselves belong to our native equipment. The brain is an instrument, a servant of our impulses and emotions, holding them in check sometimes, but ever aiming at their greatest satisfaction. The brain does not determine the ends we shall seek or the cravings we shall possess, but the means through which these ends shall be attained and the cravings satisfied.

IDEALS AS MOTIVES

But, for a great many, motives are a matter neither of nature nor of reason. They feel that they are moved, not by internal states, but by actual objects and situations, or by these conceived in ideal form. However, we should remember that the capacity of objects to attract or to repel is entirely a matter of the pleasantness or unpleasantness derived from our experience with them. It is not the objects we want, but the satisfaction derived from them. And as for ideal objects and situations, we may trace their inspiring qualities to our experience with the actual, since the ideal is but the ordinary or the known vested with desired attributes.

Ideals do not exist as something apart from the needs of the organism. They arise out of the needs which ordinary life fails to satisfy. For this reason they are not constants either as to number or strength, but vary with the internal conditions of the individual. This is well illustrated in the fact that no one is more idealistic than the youth and the maiden, since the period of youth corresponds with the period of strongest demand. The burst of idealism attending adolescence has no parallel in later life. Life gains a new meaning and a new interest. The ideals fostered during this period are very obviously linked with the physiological changes associated with it. They are projections of an internal state and represent the conditions which would be adequate to satisfy this state.

The manner in which these internal changes stir the young man and the young woman to idealistic enterprise is most interesting. The maiden, impelled by increased emotionality, and moved by tender feelings, is stirred with altruistic motives. She sees herself engaged in social uplift and reform, all for no other reason than that the glands responsible for the parental and tender emotions have begun to secrete, and because the activities upon which she has fixated have high social sanction. The incipient urges of sex make her romantic. They arouse new interests in clothes, jewels, and other means of making herself attractive. She sees herself as an actress or a movie star. She dreams of a knightly prince, of a home and surroundings where the clamorings of her heart will be satisfied. The urges of the youth are no less insistent, his ambitions are no less lofty. Standing on the threshold of life's arena, he envisages a future in which he realizes his manhood, gains distinction as an athlete, or becomes famous in a profession.

But the strength of this idealistic sentiment is apt to wane with the years. The man of middle years, tempered by experience, settles down to the habits of a work-a-day life. Disillusioned in many respects, his ideals are less insistent, occupy a smaller place in his life, are less lofty, and are apt to be of more mundane quality. The aged, on the other hand, with life's forces ebbing, incline more toward visions of another world.

Yet, amid all these changes, how like unto himself is man. Always more or less self-centered, he tends to make his own age the point of reference. If old, we are counseled with respect to the "wisdom of gray hairs." If middle aged, we are advised as to judgments "seasoned by maturity." The younger regard the older generation as old-fogyish. That generation with equal condescension refers to the "follies of youth," implying always that the changes in interest which occur with advancing years are the result of greater wisdom and reflection, little realizing that if the conditions of youth could again be restored, if the glands could again be made to secrete their stimulating potents, the "follies of youth" might again be enacted.

Why do we have ideals? Because life and its conditions are not always adequate to satisfy. Because we have internal demands and cravings which frequently receive only partial and incomplete fulfillment. Our ideals concern the things we miss the most, want the most. They change with the years, because we change. They stir us, impel us, all according to the rhythms of our inner being.

THE IDEAL OF SERVICE

Most peoples' idea of motivation is moral rather than psychological. The average man would probably agree with the moralist and the social reformer that we do not, or at least *ought* not to, live merely for the satisfaction which we can get out of life—we should live to serve our fellowmen. Now this may be very well as far as it goes, and as far as it is directed against a purely selfish and inconsiderate life. But ultimately it can be no answer to the problem of motivation. Service is a *means*, not an *end*. We do not serve merely to serve, but in order that we may further the well-being of those around us. If service were in and of itself a good thing, then we should show our generosity and unselfishness by giving the other fellow a chance to serve. But it is not so, for when we help some one it is usually with the idea of promoting his interests and increasing his satisfaction. The same may be said of the service rendered to the group. We seek to improve the living conditions of the group in order that its members may be happier and more contented.

Thus we see that the concept of service itself implicitly recognizes our general thesis, namely, that the end of human endeavor is human happiness and satisfaction. The individual who has reached the point where service is an end in itself must by his actions confirm this attitude as much as the individual who, by less socially approved methods, seeks personal gratification. He is no less "unselfish" than the other, since both are doing the things they like best. Satisfaction is ever and always our objective. If it is not immediate satisfaction, it is satisfaction farther removed—sometimes the satisfaction of a future life. A purely unselfish act is probably nonexistent. The individual moving under his own power is always doing what he wants to do. At the time, at least, it is what he wants to do the most, not necessarily because he likes the act itself, but because he likes the results of the act. We have a tooth pulled because the results of the operation appeal to us more than the results of not having it pulled.

CHAPTER II

HOW EMOTIONS SHAPE MAN'S BELIEFS

We Believe What We Want to Believe

BELIEF—WHAT IT IS AND WHY

THERE are things which we can observe, demonstrate, verify—of these we say we *know*. There are others which we cannot observe, which lie outside the range of experience, and whose existence we merely assume—of these we say we *believe*. Belief, then, is our faith or confidence in things unknown, relatively unknown, or existing on the fringe of the known. It is an attitude—an attitude of acceptance or rejection assumed in the presence of things which cannot be observed or accurately determined.

But if beliefs concern the things of which we can know little or nothing, then why isn't one belief just as good as another? Why should one be better, another worse? That few individuals or groups of individuals have been willing to concede equal merit to beliefs regarding the indeterminable is evidence of the extent to which beliefs are charged with emotion. Organized society has considered it a matter of consequence whether an individual believed in this or that set of political doctrines, and whether he adhered to this or that set of religious beliefs. Rejection of the opinion of the majority has frequently been sufficient to bring censure and opprobrium upon the dissenter, and has branded him as an anarchist or heretic. That majority opinion might easily be reversed, has counted for little. Only the injection of man's passional nature into his beliefs can account for the intense persecution to which non-conformists and unbelievers have been subjected throughout the ages.

Why should we have beliefs? Why should we make assertions regarding things we know little or nothing about? There seems to be no other answer than that man finds satisfaction in this form of self-expression. It may not be rational to make affirmations with respect to the unknown, but then man is not primarily rational. Natural inclination alone can account for interest in the things which border on the known or which lie beyond the known. Through the capacity for conscious reflection such interest is made possible, and through the force of inner demands it is made desirable.

REFLECTIVE POWER BASIC TO BELIEF

Man's projections within ideal, imaginary, or unknown spheres are made possible only by virtue of his capacity for conscious reflection. Except for this capacity, his scope of interest would be limited to the things which come within the range of his senses. Like the animal, his life would forever be the life of the moment. There could be no reflection upon the past and no contemplation of the future. No more significant step in the process of evolution was ever taken than when man fell heir to this power. It freed him from the ordinary limitations of space and time, and extended his vision far beyond the reach of his senses—far beyond the objects and events of direct perception. It made possible his adaptations to future events, and, most of all, it saw the beginning of a new world, an ideal and imaginary world, in which he might vicariously engage in experiences otherwise denied to him.

When we consider the benefits derived from man's capacity for self-projection—his increased freedom, and wider range of influence and control over his environment—it would appear to be one of life's greatest blessings. But is it? In the same measure as reflective power has increased man's possibilities for happiness, it has increased his possibilities for suffering. The animal, living the life of the moment, is conscious only of the needs of the moment, the satisfactions of the moment, and the sensations of the moment. Man's needs and cares extend into the future. He may envisage torture and travail, he may die—a hundred times. And the pain and misery endured mentally may far surpass the actual engagement, *when* and *if* it comes. He may glory in the far reaches of the mind and in its "rich stores of golden memories," but, alas, "it is at once ennobling and accursed," for, with each recall, with each fond memory, there is linked so much he would forget—moments of anguish, or remorse, of sorrow, shame, and despair. These will not die but will live to vex and mortify his spirit.

While raising man far above the level of brute creation, while giving him a freedom and nobility unattained by the lower orders, man's reflective power has also brought into the forefront life's tragedy. While enlarging his sphere of influence and increasing his possibilities for satisfaction, it has also fixed in his mind the possibilities of loss and privation, and has made him aware that some day he must die, that some day he must face possible extinction, and possible annihilation of all that he holds dear.

Before him must loom the harsh reality of it all. He must countenance the tragedy of growing old and infirm with nothing to stem the tide of destiny—the tragedy of being in a frail craft doomed to crash against the "unseen rock" and to be swallowed up by those endless waters called eternity, the tragedy of knowing and foreseeing it all—this is the tragedy of existence.

How many a courageous mortal brought face to face with this grim spectacle has not concealed his eyes and raised his voice in protest. Moved by the strongest impulse of his being, the impulse to live, he has denied its reality and declared that death was only a rebirth, the ushering in of a new life where pain, sorrow, and suffering would be no more. Through the ages man has had visions of a future life, a Promised Land, a Canaan, where he would find comfort and restitution. Without this source of consolation, life has been declared unbearable. This belief in a future state and in ultimate deliverance from bondage and suffering, whether of divine origin, of mystical origin, or merely dictated by man's passional and volitional nature, has been zealously guarded through all times. Attachment to it has been made a virtue, and condemnation has been showered upon any one who had the courage to think otherwise.

At no time is this belief stronger than in the hour of loss and privation, and at no time is man more strongly motivated to peer beyond the veil and mystery of death and to hope for the dawn of a better day. Yet, as in those memorable words of Robert Ingersoll, our striving "to look beyond the peaks is all in vain. We cry aloud, and the only answer is the echo of our wailing cry. From the voiceless lips of the unreplying dead there comes no word; *but in the night of death hope sees a star and listening love hears the rustle of a wing.*" And thus will man's immortal longings continue until the end of time and until the surge and swell of life's impulses are no more.

CONDITIONS DESTRUCTIVE TO BELIEF

We believe a thing as long as there is nothing in our experience to deny its reality. We believe in Santa Claus and in fairies until we realize the incompatibility of their existence with known facts. We believe in the reality of a statement as long as there is nothing to dispute or to contradict it. Doubt arises only as new and conflicting ideas are brought to mind. But belief, and not doubt, is primary. We tend to *accept* rather than to reject, to believe rather than to disbelieve. We dislike uncertainty, we want to feel attached, to be moored, rather than to be at sea. And so it is that in the absence of either contradictory or affirming evidence we tend to accept a proposition rather than to reject it.

That we tend to believe rather than to disbelieve (other things being equal) would indicate a certain amount of natural credulity. We are born credulous rather than critical. The child is extremely credulous. The same is true of the adult whose mental level does not exceed that of the child's. But such credulity and suggestibility are to be expected if it is true that belief depends upon the absence of conflicting elements. The limited range of experience and intelligence in the case of the child and the feeble-minded adult does not provide the background for a critical attitude. Under these conditions an idea or suggestion can enter the mind uncontradicted, and is, accordingly, accepted.

We are all child-like, credulous, and uncritical in our dreams. However bizarre the content, however impossible the combinations, they nevertheless seem real as long as the dream lasts. This is only further evidence that we tend to believe or accept as real anything which is not contradicted. In sleep, only very restricted areas of the brain are active, namely, those responsible for the dream content. As a result, there is an absence of the normal critical capacity and an absence of the general body of ideas which in our waking hours keep our ideas in check. Thus, ideas which in our waking hours would seem absurd may seem real in our dream. If, in ordinary life, the idea should come to mind that I am very rich, it is quickly dispelled by evidence to the contrary from my actual surroundings and from a group of associated ideas which immediately force themselves upon me. But if this idea occurs in a dream, in the absence of these restricting ideas, it is compelling to the mind and is accepted as genuine.

The danger to belief of contradictory ideas has usually been recognized by organizations interested in determining people's attitudes. Such organizations have guarded their supporters or constituents against adverse doctrines and against ideas which might have an undermining influence. Innocent III, in his well-known statement, *Ignorance is the mother of devotion*, implicitly recognizes that devotion to a theory or dogma depends in no small measure upon the absence of ideas of a contradictory nature. It is a matter of interest in this connection that liberalization of the various orthodox Christian denominations, resulting in a split between the so-called "fundamentalists" and "modernists," should have come in a day when education is becoming more widespread, and should have been led by the United States where so many different sects and denominations have been forced to live side by side. Such liberalization is much less likely to occur in countries where there is only one church or denomination and where education is less general.

THE AGE-OLD CONFLICT BETWEEN SCIENCE AND RELIGION

We should be inclined to agree with the best opinion of today that the interests of science and religion are not necessarily incompatible. And yet it is a matter of history that the forces representing these institutions have been at odds from the very beginning, and that contention and strife have resulted every time science has projected a theory or principle which might seem to challenge the doctrines of the Church. The chief source of friction may be traced to the tenacity with which conservative leaders have clung to the primitive cosmological concepts of the Old Testament. Insisting upon a literal interpretation of the Scriptures and upon their essential infallibility they have maintained that the entire structure of the Church must stand or fall with the cosmic views of these early writers.

Zealous believers have felt it their duty to vindicate their faith by explaining all natural phenomena on the basis of the biblical allegories and to reject as heresy any scientific theory which failed to square with doctrinal teachings. In fact, the chief business of the theologians during the Middle Ages seems to have been that of rationalizing the inconsistencies of traditional accounts and of ironing out the differences contained in sacred and secular literature. They were aware that matters of faith did not always jibe with those of reason, and in their consideration of the imponderables into which their discussions finally led, they decided, with William of Occum, that Faith and Reason belong to different realms and what is true in the one is not necessarily true in the other.

The conviction that traditional concepts which happen to be allied with religious concepts must be upheld at whatever cost seems to be as strong as ever. In a recent survey Dr. Harper of Columbia Teachers College found that 77 per cent of 3,000 educators (mostly grade- and public-school teachers) believed that "one should never allow his own experience or reason to lead him in ways that he knows are contrary to the teachings of the Bible."

To understand the differences which have constantly arisen between science and religion we must bear in mind the conditions out of which these systems have emerged. We must remember that religion had its rise in a day of animism and crude mysticism. Scientific progress, or the progress of accurate measurement and determination of the objective world, was marked by a gradual invasion of the field which in the earliest times had been covered by purely mythical and fictitious accounts. Now, owing to the conservatism which has always characterized religion, and owing to the fact that these primitive accounts had been made part and parcel of religious teachings, it is not surprising that the advance of science and its gradual invasion of this field should have met with opposition. We find, nevertheless, that the forces of religion, however reluctantly, have found it necessary to modify their views and to conform somewhat with the progress of the times.

The worst feature of the situation has been that conservative devotees, from time to time, have sought to limit the spread of knowledge and liberal thinking. They have looked upon institutions of learning with distrust and have warned the youth entering their portals to gird their loins and to brace themselves against the forces of iniquity lest, in their search for knowledge, they lose their faith. *But why should we fear open-mindedness?* Why should we be afraid to entrust the individual with the facts? Why should we fear the results of letting in the light? Is this attitude not itself a declaration of defeat, a betrayal of the faith, a recognition that the thing for which we stand rests on insecure ground?

FORCES OPPOSING FREEDOM OF TEACHING

In recent years enlightened citizens have been amazed that in a country professing freedom of speech, of thought, and of conscience, legislative bodies in almost a third of the states should have acted on measures restricting freedom in the teaching of that aspect of biology which deals with the origin, development, and transmutation of species. They have been appalled that, notwithstanding the provision of the Constitution that "Congress shall make no law respecting an establishment of religion or prohibiting the free exercise thereof," certain state legislatures have actually passed bills prohibiting the teaching of doctrines which conflict with the account of creation in Genesis, and requiring that all mention of Darwinism be removed from textbooks in state-supported schools.

It is at once pathetic and tragic that there should exist an organized attempt to restrict dissemination of the facts and findings of science as revealed to its sponsors through years of labor and toil. It is pathetic because such discrediting of science can only work against religion. Where religion has opposed science, science has usually prevailed in the end. There are no legislative or other means by which we can prevent the final emergence of truth.

Unfortunately, conservative leaders have managed to stir the masses on the question and have caused them to look upon evolution as a thing born of the devil. They have managed to align the forces of passion, ignorance, and prejudice against the forces of intelligence and liberalism. The element in society which today would suggest anti-evolution laws is the same element which in another day opposed the teachings of Copernicus, who scoffed at the findings of Bacon, who burned Bruno at the stake, who arraigned Galileo for his heretical views and required that he recant what he knew to be true.

What interests us psychologically is the fact that organized society should pass discriminatory measures against certain findings of science and not against others. One set of facts, that set which concerns evolution and the origin of the species, it opposes; another set of facts discovered by precisely the same methods it accepts. The scientist may continue his research and the teacher may continue to teach so long as the things discovered and the things taught are in agreement with traditional concepts. In this particular case there seems to be little realization on the part of those passing these restrictions that the natural sciences cannot honestly or adequately deal with the processes of development if the facts of evolution are to be omitted.

Human emotions alone can account for such measures. Human bias and prejudice alone can account for the eagerness with which we await the findings of science in one field while looking with distrust upon the findings in another. Only the projection of our passional and volitional nature could make us demand a *safe* science, a science which pleases, could make us accept only that which confirms our views. Tradition and emotion today are prohibiting the teaching of evolution just as tradition and emotion in another day prohibited the teachings of Copernicus and Galileo. Today, we accept the concept of the earth as a sphere revolving about the sun. Given time, we shall accept the concept of evolution. But it is only with the greatest difficulty that we relinquish our hold upon ideas which are emotionally satisfying.

BELIEF IN MYSTIC INSIGHT AND DIVINE REVELATION

Not content with the mere declaration of faith in the unseen world, ardent believers have sometimes professed *knowledge* of that which lies beyond the sphere of the senses, knowledge, not attained through intellect or ordinary observation, but achieved through divine communion and special illumination. This avowal of special insight is known as *mysticism.* It lays claim to knowledge of ultimate reality revealed to him who walks by faith and not by sight; revealed and known, not by reflective or discursive processes, but by intuition and immediate apprehension.

This fervent belief has been written large on the pages of religious history. Its glowing presence has quickened men's lives and lifted their hopes. It has comforted the oppressed and assuaged those weary of finitude. It has been an inspiration to poets and idealists and all those seeking freedom from the bondage of exact and measurable existence.

We know the spirit of this attitude. We recognize the feelings and desires responsible for its being—demands which grow out of major impulses and dominant drives. As a form of expression, natural and fundamental to man's life, we should not judge it too harshly. It has its place and function, its justification and right of existence, as much as any of those symbolic and ideal expressions which have served to ennoble and enrich men's lives.

But the contention of the mystic has been for something more than this. His unseen world is not merely an ideal in which he may engage vicariously and know mentally; it is a world *known* and *revealed.* It is a world lying beyond the sphere of sense perception, but a world no less real.

In justification of his claims the mystic points to experience, mystic experience. Are there then two kinds of experience, mystic experience and ordinary experience? Experience as known to the psychologist and the scientist consists of a succession of conscious states typically aroused by the interaction of ourselves with our environment, and made possible through the medium of the senses and the nervous system. Such conscious states are intimately related to physical discharges within specific brain areas, and, in fact, are not known to occur apart from such activities. But it is hardly these conscious states to which the mystic refers or upon which his claim to special knowledge and insight are founded. His knowledge is said to transcend sense and to be non-communicable through sense. We must look then to conscious states not dependent upon the sensory medium. But such conscious states are usually regarded as purely reflective or ideal, and as dealing with objects and situations which have been formed out of the replica of experience and molded into new totalities with interest and appeal.

All agree that conscious states are real as conscious states, that the ideal world is real as an ideal world, and that the objective world is real as an objective world. The differences arise when the mystic with his ideal world would invade the objective world and would make the ideal world *objectively* real; that is, when he would place the ideal world on a plane with the objective world. The two are different and relate to different orders of existence.

True, the mystic would probably agree that many conscious states are without objective counterpart. But there are some which are not simply of ideal or imaginative origin. Which ones? Well, those which are rather unusual, and particularly those with rare emotional quality. Just how these conscious states are to be singled out from the mass of imaginative content, and just what criterion is to be used in identifying them, the mystic has never made clear. While he recognizes that not all fanciful production can be accepted as divine revelation, he has left us in the dark as to how we are to know when they have such significance.

In addressing this problem of identification to the mystic, we may be referred to the experiences of ecstacy and trance. These states have been of special interest to the scientist, since they occur typically in the emotionally abnormal and are symptomatic of a disorganized and dissociated personality. Except for this fact, however, it is hard to see how they can be of special significance. Like all emotional states they have their physical basis. Ecstacy is ecstacy, and whether arising in moments of intense feeling, joy, love, reverence, or religious fervor, matters not. The internal, glandular, and neural changes upon which they depend can be distinguished as much as ever. The normal individual experiences them occasionally as when looking from a great height or when conditions favor a state of emotional intoxication. They may also be induced artificially through the use of hasheesh, ether, alcohol, and other drugs.

The true mystic, as we have observed, is somewhat intolerant of any outlook other than the mystic. He is particularly apt to belittle the methods of science, and to go so far as to say that the rational and discursive methods lead nowhere, that we must walk by faith or inner illumination and not by sight. Doubtless, he would find futile the methods by which we have attempted to analyze the presuppositions of his doctrine, in so far as we have tried to find the rational in that which is declared to be non-rational. Be that as it may, we know that over that long and rugged trail by which man has risen above the level of brute creation and freed himself from the fears and superstitions of the savage, achieved his progress and realized his humanity, over this road we know he has been guided by the light of reason, feeble though it be, and not by feeling, intuition, or immediate apprehension. It is unfortunate that we have not more light, but the demands of sanity and of progress require that we use the light we have to guide our uncertain step. Faith we may have, faith that human progress will continue, faith that we may make this world a better place to live in, but this does not mean blind faith or faith untempered by reason.

EXPERIMENTAL DETERMINATION OF EMOTIONAL FACTORS IN BELIEF

In our discussion so far interest has centered about the emotional factors which enter into and determine beliefs within the ideal sphere. But while most in evidence in this sphere, the motivating influence of such factors is by no means limited to it. The general character of this influence is recognized in the adage, "the wish is father to the thought." William James seems to have had the same idea in mind when he wrote his famous essay "The Will to Believe." F. B. Sumner, who was the first to approach the subject scientifically, declared, that

> . . . if there is one thing with which the student of the subject (belief) is impressed, it is with how small a fraction of our beliefs arise in the

> first instance through reason, or, having arisen, are maintained by it. *One believes most vividly what appeals to one's interests most strongly*, although the thing believed may take a low place in the scale of certainty.[1]

A. T. Poffenberger, in discussing the conditions of belief in advertising, says,

> . . . we tend to believe what arouses our desires, our fears and emotions generally. In strong emotion we might find the condition for belief in the bargain counter. If one really wants a certain suit of clothes or an automobile which costs more than he can pay, he may honestly believe he is making an economic purchase.[2]

To determine the general character of emotional influences upon belief an experiment was performed by the writer. A set of thirty propositions was drawn up selected from the fields of religion, ethics, politics, and science; all relating to topics of common interest. The subjects were asked to indicate the strength of their belief in connection with each of these propositions by referring them to a scale of belief with ten steps. In order that the subject might indicate not only the strength of his belief in the event he should wish to *affirm* the content of a given proposition, but the strength of disbelief in the event he should wish to *deny* its content, the scale was constructed with a positive and a negative side (see vertical axis in Fig. 1, also Fig. 2). Thus, he was able to rate a proposition anywhere between ten and zero on either the positive or negative side of the scale. Having completed these ratings for belief-strength, the subjects were asked to rate the same propositions on another scale of the same number of steps, but this time indicating the extent to which they might *desire* the content of the propositions to be true or not true.

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[1] "A Statistical Study of Belief," *Psychol. Rev.*, 1898.

[2] "The Conditions of Belief in Advertising," *Jour. Applied Psychol.*, 1923.

With these ratings it was possible to determine whether or not there was any correspondence between the beliefs and the desires of these subjects relative to

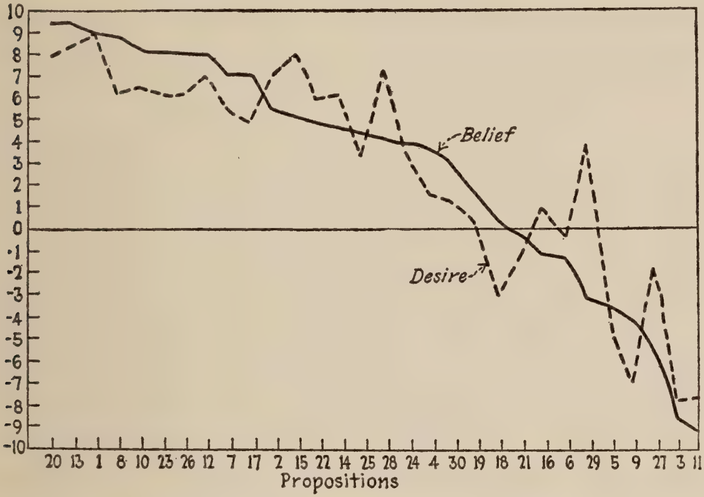

FIG. 1.—Graph representing the combined average ratings of six groups of students (total 243) on the belief and desire scales. The propositions are arranged in order of highest rating on the belief scale.

these propositions. A glance at the graph, which gives the average ratings of the thirty propositions by 243 subjects, will show the very high agreement found to exist between the two ratings. That is to say, *there was a decided tendency for the belief or the disbelief in a given proposition to be attended by a desire of the same relative strength.* The correspondence as determined by the correlation coefficient was 0.81, or about 80 per cent. The high degree of correspondence is interesting in itself, even though it tells us nothing as to the possibility of a causal connection between our desires and our beliefs. That these results were not determined merely by the nature of the particular propositions chosen for the experiment was seen from the fact that another set of propositions selected by Sumner for a different purpose yielded a correlation of 0.76.

INFLUENCE OF ENVIRONMENT, TRAINING, AND INTELLIGENCE UPON BELIEF

The more naïve and less educated groups tested showed the highest belief-desire correlations. There was also a difference in the disposition to rate propositions high or low on the scale. The less educated and more conservatively trained subjects showed less hesitation in making strong positive or strong negative affirmations on debatable questions, and particularly on questions with ideal implications. A group of grade-school teachers (women) from a conservative section of the country, and no doubt somewhat idealistically inclined, were very confident that "the Golden Rule is a practicable concept," that "a democracy is the best form of government," and that "man's conduct is not determined merely by heredity and environment." The same group ranked as most desirable of all thirty propositions one which declared for the continuation of monogamy as the accepted relation between the sexes, while a group of Columbia Sophomore boys ranked it as low as eighteenth in the order of desirability.[1]

In agreement with these findings are the results of several recent investigations conducted with respect to the religious beliefs of college students. The results of these investigations showed a positive correlation between fundamentalistic views and low intelligence, or, stated otherwise, that the more intelligent students, on the whole, were more liberal minded in regard to matters of doctrine, whereas the less intelligent students were more conservative and fundamentalistic in their views.

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[1] For a complete account of this and related experiments see *Jour. Abn. Social Psychol.*, April and July issues, 1925.

EMOTIONAL FACTORS IN PERSUASION

The art of persuasion is of special interest to the orator, writer, politician, and salesman. From the tactics of the most successful of these there would appear to be a certain realization that appeals to reason, though a universal means of *justifying* belief is by no means the primary fact in *determining* belief. The appeals of the public speaker are directed less toward justification of what he has to say than toward arousing the petty prejudices and beliefs of his audience by emphasizing the relation between his project and what is *already* desired or believed by his auditors. The politician aligns his program according to the primary passions and preconceived notions of his audience. Such devices are among the most successful by which the artful speaker gains an inroad for the ideas he wants to disseminate. To prove to an audience that the ideas advocated are in accord with what is already believed is by no means unimportant in the art of persuasion. To have our ideas *confirmed* appeals to our ego; to have them attacked arouses an attitude of defiance and opposition. This is not so strange, since our ideas and beliefs in their intimate relation to the ego frequently become our most cherished possession, and, consequently, to have them assailed is equivalent to an attack upon our person.

Another important factor in persuasion is the influence of *order* and arrangement in presentation. Should this follow the traditionally accepted climax order, that is, from weaker to stronger? Or should the order be reversed? We shall attempt to answer this question in the next section.

THE LAW OF PRIMACY IN PERSUASION

To be swayed by rational factors alone is not only upheld as an ideal, but in practice its actuality is frequently presupposed. This is the case in debates, where it is assumed that both sides are given an equal opportunity when both are allowed an equal length of time to present their argument. This would be a perfectly valid assumption if people reached their decisions by a dispassionate weighing of pros and cons, and if non-rational factors did not have to be taken into account. Whether the side of a question first presented is at an advantage or a disadvantage, might be determined by working up positive and negative arguments of the same length and persuasive quality and presenting these to different groups, giving one group the positive arguments first and another the negative arguments first. This procedure was carried out with several groups of subjects and with different propositions. Figure 2 gives the results from two groups on one of these propositions, "Should all men have equal political rights?" The groups were presented with identically the same discussions but in reverse order. Group A read the positive discussion first and, following the reading, rated the proposition on the belief scale. Before reading this nothing was said about it being a positive or negative discussion, nor were they aware of what was to follow. They were then given the negative discussion and asked to make a second rating. The procedure for Group B was the same as for Group A, except that they were given the negative discussion first and the positive discussion afterwards. From the figure it will be seen that the discussion first read was much more important in determining the position of the subjects than the second discussion. In the figure the first average rating is the rating made before being given any discussion; the second average

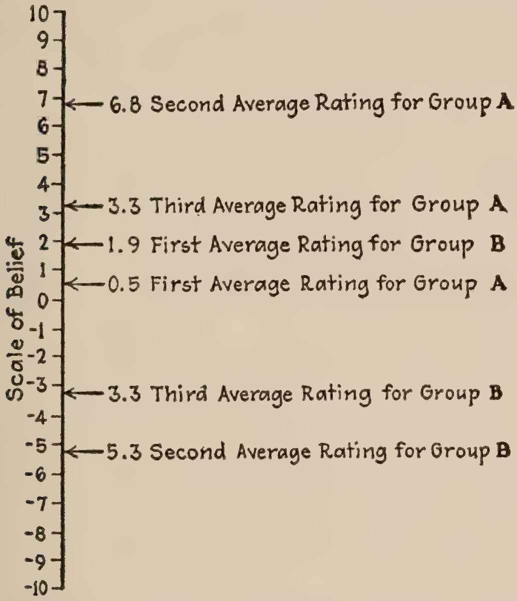

Fig. 2.—Average ratings for the proposition "Should all men have equal political rights?" Group A, positive discussion first; group B, negative discussion first.

rating is the rating made after reading the first discussion; the third average rating is the rating made after reading the second discussion.

Here we have two groups whose position on a proposition was practically the same before having any discussion on the subject, but who, after reading the same discussion (but in reverse order) stand far apart in their final rating or judgment of the proposition's content.

How are we to account for the undue weight apparently given to the order of presentation? A factor which immediately suggests itself is the *ideal of consistency*. We feel called upon to be consistent in the same way as we feel called upon to be rational, or as we feel called upon to observe any other ideal which has gained social commendation. Once we have committed ourselves we dare not relinquish our position lest we be challenged with our former statements. The subjects in the above experiment, having committed themselves after reading the first discussion, remembered this rating and may have been influenced by a desire to be consistent when asked to make a second rating. They were not influenced by the first rating indicated in the figure as first average rating because this was made on a somewhat earlier occasion and in connection with a great many other ratings.

But the fact of *primacy*, which appears to be an undeniable factor in persuasion, may be accounted for in other ways than by referring it to the consistency principle. A belief gains a certain personal connotation though it may never have been expressed. To have formed an idea and inwardly to have yielded to its persuasive influence is sufficient to make it seem *ours* and something to which we owe our allegiance. Thus, the first time a proposition is presented to us we tend to form an opinion and we do so according to the influences present to shape it. Later, such an opinion may gain a certain emotional content if it is contradicted. This follows because of its personal reference and because we would not have our ideas appear frail and inconsequential. In any event, it is clear that a proposition, once it has been accepted and has gained a foothold, is not to be dislodged by an equal amount of argument on the other side. Emotional factors, then, are basic to the law of primacy, and give an advantage to the side of a question first presented.

The law of primacy as an indubitable factor in persuasion has many practical bearings. Not only is it an important principle to be observed by the speaker, writer, or advertiser, but our social, religious, and political institutions must owe much of their life and allegiance to the fact that their supporters were indoctrinated in their basic tenets at an early age. Whether we are Democrats or Republicans, Protestants or Catholics, is frequently considered a matter of parental and ancestral affiliation. However, it is doubtful whether family ties, or family considerations, are nearly as important determinants as the fact that we *first* became familiar with the beliefs and defenses of beliefs of our family.

NON-RATIONAL BASIS OF BELIEF

Where, on this moonlit and dream-visited planet, asks James, are we to find beliefs based on rational and objective evidence? Where, indeed, should we expect to find them if that radiant core of things of which he speaks is not rational but emotional? The warmth and the glow of the things we do and the things we believe, cannot be a product of our rational nature. It is not this aspect of our being which moves and impels, or which gives to life its color and its zest. All that any of us can say is that we find ourselves here, and find ourselves engaging in this, that, and the other activity for no apparent reason except that it *satisfies* or *promises to satisfy*.

And what is true of our physical life is just as true of our ideal life and the beliefs relating to it. There is, in fact, no reason why that aspect of our nature which controls our physical activities should not also control activities of a less objective variety. If anything, non-rational factors should be more prominent within the ideal sphere, since this sphere provides greater latitude and greater freedom for the play of the emotions.

It is because our beliefs and our attitudes spring from emotional and non-rational sources that very few of us are able to give anything like a rational account of our beliefs. And how could it be otherwise in view of the circumstances which have provided for our beliefs? Most of them are of societal and traditional origin, being accepted and passed on from generation to generation because they appeal, or because they serve some distinct purpose in the organization of society. From the beginning we find ourselves accepting these beliefs on exactly the same grounds as those before us accepted them—they appeal, they satisfy—and, in any event, no reason occurs to us why we should *not* accept them. Very few ever question the reality of things they are taught; they haven't the perspective and they haven't the desire. Why should they bother their heads when they find that "most people believe that way," and when they find men in authority contending for these same views. And so it happens that their faith is really someone else's faith, appropriated, of course, and once appropriated, regarded as their own. They are satisfied to possess one or two arguments or reasons which they may recite, should their credulity be challenged. And should this meager defense prove inadequate in a moment of need, that, too, may be overlooked. The believer still persists in his belief, an attitude which has become familiar in the lines

A man convinced against his will
Is of the same opinion still.

It is useless to argue or to apply standards of logic when the thing in question holds no relation to logic. Argument never went far toward changing the mind of anyone on matters of a non-rational character.

The interesting thing about the average man's beliefs is that they all appear to him as obvious and self-evident, despite the fact that he has never really inquired into their nature, and, in most instances, has merely accepted his views on the say-so of others. He *knows* and feels *sure* of himself, where the man of insight feels extremely uncertain. He knows, for example, whether prohibition is a good thing or not. He knows what ought to be done about war and disarmament. He knows how the country ought to be run and how it will look fifty years from now. He can tell you about the nature and the origin of the universe, about morals, religion, and the social order.

It is obvious that most of his views on these subjects must be discounted as mere opinion and as simply reflecting his educational and social background. They are without rational foundation. How could it be otherwise when they deal with matters upon which even the expert is reluctant to voice an opinion. Yet the average man not only feels very sure of himself on these subjects, but, curiously enough, feels much more keenly about them than about matters of a more certain and objective nature.

BELIEF IN OUR OWN RATIONALITY

Even the casual observer must be aware that educational and emotional factors are by far the most important influences in shaping and moulding man's beliefs. Any one would allow that the most probable conditions determining a man's political and religious affiliations are his home surroundings and a set of special motivations associated with his party preference and his religious sympathies. We should expect to find that a man who is a good Republican was reared in Republican traditions and the son of Republican parents, and that the individual who is a Catholic was brought up Catholic. The boy inculcated with ideals of the Fascist State is almost bound to give his allegiance to Fascism, and if trained in the schools of the Soviet is just as sure to become a believer in Soviet rule. With the same certainty we might predict that some one born in northern Ireland would become a Protestant and if born in southern Ireland would grow up Catholic. We do not doubt these facts, we take them for granted, that is, as long as we are considering the *other* fellow's beliefs. We accept the principle *generally*, never *individually*. No one believes he is himself non-rational—non-rationality is unique in being a trait possessed exclusively by others. If we ask some one *why* he is a Fascist, a Bolshevist, a Catholic, or a Protestant, what will be his answer? Will he say, "I am a Bolshevist because I was trained to think bolshevistically," or, "I am a Catholic because my parents were Catholic and because I was brought up in the Catholic faith"? Hardly! In most cases the individual so questioned will answer with the particular justification of the teachings in which he has been reared. He will give *reasons* for his beliefs and persuasions, with the implication that his convictions are based upon a dispassionate weighing of the evidence in the case.

RATIONALIZATION

Every one wants to believe that he is rationally motivated and that his acts and beliefs grow out of rational considerations. The discovery of such motives seems extremely important to us all, and we should be loath to admit that, for the most part, we do not know the "why" of our acts, or the "wherefore" of our beliefs—loath to admit that we are, first and foremost, creatures of habit, impulse, and instinct.

We may recognize that the desire to find rational confirmation for personal beliefs is well-nigh universal, and that each individual would have us believe that his own private attachments are of a rational order. But the universality here observed is one of desire and not of fact. Rather than being a universal or even general means of *determining* man's attitudes and beliefs, reasoning is the universal means of *justifying* them.

Society upholds rationality as an ideal, probably because it is rare, and because, like unselfishness, it has to be cultivated since it is not a product of the natural man. The individual, in his attempt to measure up to this ideal, prefers to find *reasons* for his conduct wherever possible. And, again, rather than allow that teaching, training, and personal preference are basic to his beliefs and attitudes he erects a series of rational considerations which had nothing to do with them in the first place. For the most part we *act* or we *believe* without exactly knowing why. A great complex of factors arising out of our environment, past experience, and early education usually determines each specific adjustment. Of these factors we are all but unaware. Accordingly, it is useless to ask the average individual why he thinks, acts, or behaves as he does. He doesn't know and couldn't know; a fact of which he is also unaware. He is almost sure to give a lot of self-constructed conditions without knowing that they are self-constructed.

We must reverse the order of the process as usually conceived. In the typical situation, reasoning does not precede conduct, nor does it determine belief. We act first, we believe first—the conditions of our acts and beliefs being mostly of a non-rational character. Reasoning, if it occurs at all, is apt to follow rather than precede, and is introduced adventitiously as a means of justifying belief. This tendency to dress up the facts of our life and conduct, and more or less consciously to substitute for the true conditions a set of ideal and socially approved circumstances is called *rationalization*. We all concur in this disposition. We all want to appear to our best advantage. The inner, as well as the outer man, must be dressed and embellished according to conventional modes. He fears to meet the public eye without the trappings and accoutrements of social design. Almost inevitably the individual in rehearsing or relating his past tells, not what he did, exactly, but what he ought to have done, not what he said, but what he ought to have said. The reasons with which he justifies his acts may not be the *real* reasons, but they will be *good reasons.*

PRESSING MAN'S EMOTIONS AND BELIEFS INTO SERVICE

That man is swayed by influences of an emotional and non-rational character has been of tremendous significance for the life of the group, the clan, tribe, or nation. In fact, the solidarity of the group could not be achieved in the absence of such influences. The efficacy of emotional and non-rational appeal has long been recognized by social and political leaders, and has been used to advantage not only in controlling majority-opinion but *by ingrafting upon traditional beliefs such additional concepts as might serve their special needs and private ambitions.*

To this end religious beliefs, in particular, have been pressed into service and made the vehicles of the morals and the ethical codes of the social group. Most religious systems were originally independent of political and moral codes, as indeed a number of writers on anthropology and comparative religion have shown. These writers have presented evidence that doctrines which on a lower cultural level were purely religious and philosophical have tended on higher levels to become ethical, and that the religion of the savage, which typically represents his philosophy of nature, gradually becomes a religio-ethical system and an instrument of social control.

In this process of change and transformation the principles of reward and punishment, which are basic to morality and the chief means of securing submission and conformity, have been extended in their influence and effectiveness by association with accepted religious doctrine. Reward for good deeds and right living, and punishment for evil and wrongdoing, were not only to be observed in this life but were to receive their adequate fulfillment in the life beyond. Upon man's life here would depend his future life, whether it was to be one of eternal bliss or of endless suffering.

Thus, the fears and the desires already projected within the ideal and mystic sphere were further charged with the anticipation of final retribution and a final tribunal to judge each man according to his deserts. When doubt and scepticism began to threaten the bulwarks of established religion, and, thereby, to endanger the moral and ethical precepts which had been a part of religious doctrine, belief or faith was made a special virtue and, along with meekness, loyalty, and submission became an important factor in the ultimate dispensation of reward or punishment.

In the process of aligning man's emotions for the purpose of securing social and moral allegiance, the marshalling of man's fears seems to have been of chief significance. During the Middle Ages and almost down to our own times appeals to man's fears and his dread of punishment seems to have been the chief means of securing subordination and conformity with the established order. On the facades of ancient cathedrals one may still see sculpturing which, for the benefit of the wicked, displays the fear-inspiring jaws of Death and the yawning chasms of Hell ready to receive and swallow their victims. This method of impressing upon man the urgent need of particular social and religious observances must have actuated Robert Burns when he wrote

> The fear of Hell's a hangman's whip
> To haud the wretch in order.

The persuasive power of this picture of the awful things in store for the wayward was further enhanced by reference to the "all-seeing-Eye" which penetrated the most secret chambers of man's heart and recorded the things concealed from men.

The positive appeal with emphasis upon the good things to be achieved by the righteous has not always been left in the background. This is true of primitive philosophies and religions which, in so far as they have given thought to the after life, have been concerned mainly with the realization of the desired state. Thus, to hunt on the prairies of eternal spring was to be the good fortune of the Indian who had been a skillful hunter and a brave warrior. Valhalla was to be the reward of the valiant Norsemen who died in battle, and the happy land of Torngarsuk was to be the compensation of the worthy Greenlander who had taken many whales and seals, born much hardship, or drowned at sea.

CHAPTER III

HOW EMOTIONS DIRECT MAN'S THINKING

MAN'S MOST CHERISHED DELUSION

. . . a creature, not prone nor brute as other creatures, but endowed with the sanctity of reason.—MILTON.

THAT man is a creature of reason—rationally inspired and rationally motivated—is one of the oldest and most cherished of human beliefs. Few, if any, beliefs have been guarded more closely. Few have received more ardent or zealous support. The idea has been cherished because it satisfies, because it appeals to man's ego to be assigned a place of special significance in the order of living creatures. Man has wanted to see himself as *different*, not in degree but in kind. He has wanted to see a gulf, the gulf of his own rationality, separating him from the lower orders—a gulf that was real, not imaginary. He has been wont to feel that, whereas animals are moved by their instincts and lower nature, man is moved by reason. What man does is sensible, rational. And so, indeed, the world and living kind must appear when viewed with the eyes of man and with the eyes of prejudice.

From a more objective standpoint, however, human life is no more rational than in the case of animals. What man wants and what he seeks are as much a product of his emotional and instinctive nature as in the case of other beings. Ultimately, there can be no *rational* justification for our wants and interests. That we want to live, that we want life's pleasures and life's comforts, is not a rational thing. Nor is it irrational. It is non-rational. Pleasures and comforts are ultimates. They exist in their own right and for their own sake. They need no justification. We seek them, we find delight in them, because we are what we are and because our nature is what it is. If our nature were different our demands would be different, our satisfactions different.

What shall we say then? Is man not an intelligent being? Is he not rational? He is, but not the way we usually think he is. His rationality consists, not in what he wants, but in how effectively he goes about it. Our mistake is in supposing that reason can have anything to do with ultimates. It is in failing to realize that it is a servant functioning in the interest of demands which are themselves non-rational. Reason, then, is not so cold, nor thought so dispassionate as we are apt to think. Rational processes are concerned with *means*, not with ends. They are the handmaids of instinct and desire. Nature determines these desires while reason determines the ways and means of satisfying them. Nature determines *what* we shall seek, reason determines *how* we shall seek it. We show our intelligence not in the things we want or the things we find good, but in the efficiency with which we secure them.

IDOLS OF DESIRE

Sir Francis Bacon was one of the first to recognize the directing and moulding influence of emotions upon thinking. He found in the human heart *Idols*, Idols of Desire, to which Will and Intellect are subservient. These Idols were but one of four species enumerated by him as responsible for errors in thinking. They were the sources of confusion to the human mind. The Idols of Desire were presented as the forces responsible for *prejudice* and for *preferred ways of thinking*.

He speaks of these Idols as *Idols of the Cave* because it is typically when man withdraws from the outside world into his cave, that is, into his personal abode, that the Idols of Desire exercise their greatest influence. In the privacy of the cave they beset his mind predisposing him toward reconstructions of the world and its events according to ideal patterns. It is typically in the seclusion of his personal abode that man indulges in fancied and ideal forms of existence. It was here that folk lore had its origin and that legendary history had its beginning. Here in secret the Idols of Desire and of Aspiration were freed from the restraining influence of the senses. Here by his own hearth where dream and reality were most apt to blend, here through the ages, man has dreamed and spun his tale, woven his myth, and created a world after his own liking.

MAN AS A MYTHMAKER

Man is naturally a mythmaker, a story-teller. He likes the dramatic, the emotionally stirring. Moreover, he is naturally self-centered. And so, when he comes to give an account of something he does not understand, or something which lies beyond the realm of experience, he follows the dictates of his desires. In these accounts he makes himself the center of the stage, just as the individual who, in recounting his past, reconstructs the order of events in a way most favorable to himself. Mythological accounts of life, nature, and existence reveal this disposition most clearly. In these accounts man, following natural inclination, creates a world in which all subserves his own interests. All that happens has special bearing upon his existence. Not only is he the center of the stage, but his place of abode is the center of the universe. Events in nature are particularly significant for his conduct and may even be prophetic of the future. *Other* creatures and other forms of existence are significant only in their relation to *his* existence. Even the heavenly bodies cannot exist in their own right, but must be made to subserve human ends. And once such cosmic illusions have been accepted and canonized, woe unto him who would disturb them.

Thus, the most outstanding characteristic of mythical and speculative accounts is the tendency to dramatize events in the direction of human interest and demand. Such dramatization is most apparent in the older mythologies. But it is by no means absent in more recent accounts. It is still apparent in biographical, nationalistic, and philosophical writings. In these we still condone the glorification of the things which concern us most. We still accept the dramatized and emotional appeal in our national histories and in our theological and philosophical writings. In fact, should these idealized products be stripped of their emotional elements they would be without interest and would not long survive.

MYTHMAKING NOT A LOST ART

Mythmaking, then, is not a lost art. But man is a better artist. In this statement, no reflection is intended upon the weaver of ancient lore. He did not have the leisure, and, what is more, his reconstructions did not have to measure up to the same standards in order to pass muster. Today, with education becoming more general, the censor is stricter and the disguise must be more complete.

Even the scientific field does not escape the mythmaking tendency. Consider, for example, the Freudian and psychoanalytic systems. The popularity of these is due less to the scientific elements which they contain than to the highly dramatized versions of human nature for which they have become noted. Cursory examination of the psychoanalytic theory as originally propounded reveals a theme which is really an adaptation of one which long has served to stir man's imagination. It is the theme of *conflict*—conflict between Good and Evil, or, in this case, between the better and the worse self. In the traditional manner these forces are personified, and appropriate realms, ideally good and ideally bad, are created as their place of abode. There is the nether world, the *subconscious*, where dwell imps, the *complexes*. These complexes are of varied nature and character; but all of them partake of dark and forbidding countenances. They represent the experiences the individual would forget, and the desires which are lacking in social sanction. It is because of their disagreeable character that these entities have been suppressed into the subconscious. But while thus confined within this limbo, they are still able to exert an active influence upon the life of the individual. Of all the complexes, however, none is more powerful or crafty than that of sex. The influence of this complex is constant and persistent, but, because of varied guise, usually goes unrecognized.

Standing guard over the realm of the subconscious is a spirit of austere mien, the *psychic censor*, whose business it is to prevent the free expression of suppressed desires. These desires may pass the censor and find expression only by appearing in disguise, the completeness of the disguise varying with the strictness of the censor.

The psychoanalyst very appropriately completes the picture with the introduction of a Nirvana, a world of dreams in which the unsatisfied demands of the individual receive their fulfillment by way of *sublimation.*

In this restatement of Freudian doctrine we have confined ourselves almost entirely to the ideas originally presented by Freud. For this reason we may not appear to have treated it fairly. Psychoanalytic doctrine, as known today, has been pruned of many of its more objectionable features. It should also be remembered that Freud in his use of the term sex has something much more inclusive in mind than is ordinarily the case.

MYTHMAKING IN PHILOSOPHY AND THEOLOGY

But the most intriguing forms of myth are to be found neither in the lowly accounts of the ancients, nor in the elaborations of semi- and pseudo-scientific systems. More fascinating than all of these, and enjoying a much more exalted position in the minds of men today, are the forms of mythmaking embodied in those systems which we have called *ideal*, such systems as belong under the head of philosophy, ethics, and theology.

But while more exalted in form and more inspiring in content, they show, to a certain extent, the same motivations, the same desires, which actuated their more humble predecessors. We have called them ideal for two reasons: first, because they deal with matters we don't understand and don't know much about; second, because they reconstruct the present order of existence and present a world after man's own heart, that is, a world idealized. As ideal systems they attempt to solve for us the problems of life and existence, of man and his place in the order of living beings. They fail because their approach is not objective, and because they are too largely fashioned under the influence of special motivation.

WHAT IS A MYTH?

It is in the ideal, mythical, and speculative systems that we see most clearly the directing influence of emotions upon thinking. When man idealizes, dramatizes, or reconstructs he is very apt to do so in the direction of wish, of desire, and of natural inclination.

But the grouping of subjective and speculative systems with the *mythical* may not seem entirely warranted. We have come to think of myths and the mythical as the exclusive properties of savagery, as the products of superstition and barbarism, as fictions expounded and elaborated by primitive man in a vain attempt to solve the mysteries of the world about him. That is to say, we have come to think of the myth as belonging entirely to the past. This being the case we naturally resent the charge of mythmaking in our modern day and age. But, as we see it, the very idea that mythmaking is a thing of the past is only another myth, that is, an idea which satisfies, a fiction evolved under ideal motivation.

We should realize, in the first place, that there still survives in our religion, theology, philosophy, and history mythical accounts which are accepted as genuine. We accept them because they appeal, and because no one is in a position to disprove them. In the second place, man has not ceased to speculate about matters which lie beyond the pale of experience, nor ceased to lay down as factual that which is purely fictitious. And, finally, man is still possessed of desires and has not been relieved of the shortcomings and limitations which prompted mythmaking in the days of the cave dweller. These influences are as much at work as ever.

The myth of the cave dweller was his *philosophy*. It was his best guess as to what *might* be true, just as philosophy of today is man's best guess as to the nature of things yet untested by science. Now, as then, the myth is concerned with fictive origins, with causes, supernatural events, and with unseen realities assumed to pervade the universe. Now, as then, ideal and speculative systems are concerned with abstractions, with conceptual forms, such as Justice, Freedom, Equality, Love of God, Brotherhood of Man. Idealists, seers—hopeful men who know the needs of famished souls—are still providing us with abstractions which have no place in the objective world, but which nevertheless inspire us because of the entrancing possibilities which they hold out to us.

What then, is a myth? It is an imaginary account purporting to be real but actually dealing with objects, events, and forms of being which have not been observed nor accurately determined.

INFLUENCE OF EMOTION UPON THE CONCEPT OF CAUSE

Things which behave in a fairly regular and uniform manner are usually believed to be caused. Those which behave in an irregular and seemingly sporadic way are believed to be uncaused. Thus, the Sioux theologian declared that everything was caused by the Great Spirit except *wild rice*, which occurred by *chance*, since it was apt to appear most anywhere.

That people should believe that some things occur by chance or *just happen* is a matter of interest. For instance, the way a coin turns when tossed is said to be a matter of chance. Yet we should recognize that if the coin were flipped by a machine with a constant energy expenditure, we could predict the way it would turn. The same may be said of any other situation called *chance*. Chance is unreal, for when the conditions to which it is applied are brought under control they are found to be as truly caused as ever. It is merely a term with which we cover up our ignorance, a term used to describe situations in which the outcome is unpredictable and in which the causes are unknown.

The apparently lawless and spontaneous expression of the imagination is another situation in which things are believed to *just happen*. In this case, however, we prefer to use the term *creation* rather than *chance* because the product of imagination may prove useful. But if it does it will be because it squares with experience and because it is a product of experience. But if consistent with experience, could it be lawless? Hardly. In any event the concept of creation is as fictitious as that of chance. For if it means that something can come out of nothing then it is unintelligible. And if it refers merely to the fact of rearrangement of already existing things (as in the construction of a building or a beautiful mosaic) then creation is going on all the time, since things are not static but change constantly, both in their internal organization and in their external relations.

INCONSISTENCIES HARBORED BY THE MIND

If someone wakes up and finds thumbtacks in his bed he doesn't think they *just happened*. Or, if he has been in swimming and finds his clothes missing, he doesn't believe they just disappeared of themselves. In his practical life man is inclined to believe there is a cause for everything, a reason. He believes things come from somewhere and are not mere accidents. This as a general principle he accepts. And yet, in his concepts of chance and creation, he allows, by implication at least, for exceptions. On the one hand we see man as a realist, on the other as a mystic. On the one hand accepting creation, on the other denying its possibility, the possibility of something coming out of nothing. *In his practical life he believes everything is caused; in his ideal life, the life of myth, he believes events may occur without reference to law, without dependence upon the principles of cause and effect.*

Why these inconsistencies? Why these contradictions? The answer is apparent if we will but observe the situations in which they occur. It is where there is a *conflict between the ideal and the actual*. Man is willing to go just so far in his observation of law as the controlling principle. *How far?* As far as it is consistent with his desires and special interests. As far as the Idols of Desire will permit. As far as the application of the principle does not conflict with his ideal world or the world of imagination.

Experience has forced upon man the universality of law and the universality of cause and effect. But he gets into difficulty when he begins to apply these principles to his own conduct and behavior, and particularly when he begins to relate them to the concept of personal freedom. If law is universal then there cannot be beings who are not under the influence of law. Behavior cannot be free and still determined. And yet so strong are man's feelings on this point that emotion is permitted to rule and the contradiction is accepted.

Man may be willing to think of human nature as subject to law if he happens to be interested in an advertizing campaign or when he is interested in selling some commodity. He may even be willing to allow that it is futile to study human nature if human nature doesn't stay put, or if it is possessed of a spontaneity all its own. And yet alongside all these convictions he may still nurture the belief that his own acts are free from any influence whatsoever. He may see in himself (and somewhat less in others) the possibility of acting in accordance with the needs of his environment and his inner nature, and, again, the possibility of breaking away entirely, *of breaking away from the continuity of mental and physical events and acting without cause*. In this, he believes, consists his freedom.

How the individual reacts to this idea depends somewhat, however, upon the emotional state in which he happens to be at the time. He may profess to know why particular people react in particular ways in particular situations, and yet when stirred by other emotions this same individual may declare with feeling that to view human conduct as a product of cause and effect is to deprive man of his essential freedom and to degrade him into a soulless machine.

To conceive of human conduct as typically controlled by law but occasionally breaking away and acting contrary to law is like conceiving of a pair of scales, for the most part acting according to the weights in the balance and according to the law of gravity, but also having the mysterious power of turning of their own accord and contrary to the weights.

WHY THE MYTHS OF DIFFERENT RACES ARE ALIKE

Why are the mythical fabrications of different peoples so much alike? Why should the same thread, the same theme, so often be duplicated? Why should the imagination of different races erect structures so similar in pattern and so uniform in content?

The more restrained observers have tended to lay these similarities to similarities in the environment and experience of tribes fostering similar myths. Zealous believers, on the other hand, eager to find support for their own ideas, have contended that the presence of common elements in the beliefs of diverse races is evidence of the truth of these elements. For the purpose of justifying their own beliefs they have extolled the virtues of mythical conceptions of the most barbaric tribes. They have asserted, for instance, that the widespread acceptance of deities and spiritual beings, of immortality and other forms of existence, is evidence of their reality. We are advised further that where common beliefs occur—not founded on experience—these beliefs are intuitive or inborn, inspired, perhaps, by some supernatural agency.

But the individual convinced by this line of argument is not likely to be consistent. The argument works only when dealing with beliefs he himself accepts. Other beliefs equally common among different tribes and races are likely to be rejected as superstitions. This sorting of beliefs and inconsistent application of argument is obviously a case of desire motivating belief, and of reasoning not to *determine* belief, but to *support* it.

Whether we accept immortality and related concepts or not, we can hardly present as evidence the wide acceptance of these beliefs, since this would necessitate the acceptance of a great many superstitions which we offhand judge to be preposterous. If the wide consent of different peoples is evidence of reality, then we should accept as real the widespread belief in ghosts, monsters, giants, and other fantastic creatures. We should believe that a nightmare is the visit of a demon and insanity and disease the work of evil spirits.

Two interpretations of the possible origin of similarities in myth and belief have been considered. One interpretation attributes these similarities to similarities in environment and experience. The other attributes them to intuition or to ideas implanted by supernatural agencies. Both err in giving chief consideration to external circumstances.

We shall never understand the myths, the beliefs, and practices of the human race until we learn to take account of the individual himself— a creature with definite wants and cravings, some of which find adequate satisfaction in the world as it is, and some of which do not. This introduces a third possible explanation of our problem, namely, that similarities in ideal and imaginary concepts are in no small measure due to similarities in the demands of human individuals, and to similarities in the shortcomings of human existence. If life and existence in different parts of the earth and during different epochs have fallen short of the ideal in the same way, then why should men's minds *not* create similar forms of imaginary existence adequate to satisfy and to supplement the existence known to them.

INFLUENCE OF DIFFERENT STANDARDS OF CREDULITY

How many a boy, musing over the extraordinary tales of giants and monsters, has not wondered why beings so strange and events so dramatic should have remained so distinctly the features only of the long ago. How often on the school bench has he not been struck with the magnificance of the heroes of the past, as compared with the ordinary character of men of today. How many a lad in the Sunday school has not wondered why miracles have ceased to happen, why saints and prophets no longer arise with power to control the elements and with grace to heal the sick and the blind, why God has ceased to reveal himself in the heavens and ceased to smite the enemies of His chosen people.

His queries may have been answered with the statement that *the world has changed since then*, and that in those early days when the foundations of the State and the Church were laid it was more important that supermen should arise and wonder episodes should occur. Or he may have been told that it was because of *the widespread wickedness* of men of today that signs no longer appear in the heavens.

But while these arguments about a changed world and an extremely wicked world may have satisfied the child, they do not satisfy the adult, who is more critical and who through wider experience has adopted *different standards of possibility*. But just as the standards of possibility change in the life of the individual, so they have changed in the life of the race. What seemed plausible to the mythmaker still in the childhood stage, no longer seems plausible when measured by modern standards.

It would seem, then, that the dramatic and marvellous content of earlier myths might best be attributed to the standards of possibility entertained by the ancient mythmaker. Superhuman feats of gods and heroes were credible enough in days when existing canons of evidence were so much less rigid and when the traditions of the mythmaker and his audience were congenial to such strange and marvellous events.

MYTH AS A MEDIUM OF INSPIRATION

We have already observed that such ideal systems as philosophy and theology are forms of modern myth, since they represent, as indeed all myth represents, man's best guess as to the nature of things which lie beyond the field of natural science.

But while the myth, both ancient and modern, may be regarded as a means through which man expresses his ideas concerning forms of existence yet untouched by science, its more important function is to serve as a medium of inspiration, a means of conveying and perpetuating certain emotions and certain experiences which the individual finds good. So far as this function is concerned the myth has remained the same. In form and content it may have changed to suit the needs and standards of the time, but in aim and purpose it has never changed. The modern myth is, no doubt, a more finished product. In the same way as the crude spears and clubs of the savage have been replaced by more finished and perfected weapons, so, again, the bold rough-hewn myths reflecting the simple philosophy of the savage have been replaced by more constrained and elevated systems. But the ancient myth is much more interesting because it throws into relief the essential processes and structures of the mind. It shows so much more clearly how emotion and disposition mold and fashion the processes of reflection.

Some modern mythmakers have made it their business to prune ancient and classic myths of their cruder and less rational elements, believing that through such a process of purification they will get at the true facts back of the myth. They have taken the interesting beings of heroic and divine antiquity and transformed them into figures more consistent with experience. Atlas, they tell us, was probably some astronomer, while Zeus may have been an ancient monarch. Jack the Giant-killer may have lived but he didn't kill any giants.

It is hard to be patient with this sort of thing. As well might we take the weapons and tools of the savage, or the drawings on the walls of his cave, and reshape them to conform with modern standards. Whatever we may think of the remains of primitive life and thought, any attempt to reshape or transform them is barbaric and unappreciative in the extreme.

What is more, a modern interpretation of an ancient myth is, after all, only another myth. Where the interpreter believes he is purifying the myth he is really but carrying the process of fabrication a step further. In place of one myth he is giving us another usually less artistic and less imaginative.

THE ART OF POETRY AND OF MYTH

For any one interested in mental operations the simple untrammelled expression of the child and the savage furnish the most interesting and productive material. As yet, unspoiled by tradition, the mental life and expression of these is much more genuine.

It requires no close scrutiny of the mental life of the child and the savage to realize how self-centered man in his natural state is apt to be. This is particularly evident in the tendency toward self-projection, that is, the tendency to attribute to one's surroundings the qualities of one's own experience. The child, as the savage, humanizes the objects about him and endows them with feelings and motives similar to his own. Chairs, dolls, and wooden horses lead conscious lives and possess voluntary impulses not unlike those of other creatures.

Since the child's first understanding concerns his own life and the life of other human beings, it is not strange that his first explanations of events should be humanized explanations, and that his first ideas about natural objects should show a carry-over from his personal experience.

This animistic tendency, this disposition to attribute to the inanimate the characteristics of the animate, is something we never quite get away from. Even the intelligent adult in a moment of passion may be impelled to seize, crush, shake, or kick a lifeless object if this object happens to have been the occasion of a painful experience.

The savage never advances far beyond this crude animism. He continues to conceive of the wind, the trees, the rivers, the sun, the moon, and the stars, as animate powers leading lives similar to his own. In his nature myths he shows this most clearly. In these he describes in animistic terms the life of natural objects. Whether the artistic versions contained in his nature myths represent his true conception of his surroundings or merely a poetic rendering is hard to tell. Whichever it is matters very little. It is possible that he took his nature no more seriously than we take our idealistic systems of philosophy today.

That poetry has much in common with primitive nature myths is quite obvious. Both are products of the imagination, both are elaborated under the sway of emotions. Both hold out to us a life more inviting, more entrancing. In both, nature, whether animate or inanimate, is endowed with mystic powers. We still condone in our poetry the old animistic theory of nature. Poetic license has thus served to keep alive an attitude which science and education have all but destroyed. In our poetry the spreading trees, the babbling brook, the rushing wind, and the flying clouds are again endowed with life and possessed of will. It represents a more *conscious* fiction, perhaps, and one more highly wrought, but it shares with the fictions of the past the desire to see nature in a more dramatic rôle and the desire to impart to it the attributes of human existence. In the art of poetry the soul of myth still lives its throbbing vivid existence, still lives in all its splendor, in all its artistic beauty. And it is to be hoped that it may continue to keep alive this form of imaginative expression.

THE DEMAND FOR THE DRAMATIC

As already noted, it is in his mental projections within regions unknown and unexplored that the directing influence of man's emotions is most in evidence. Within these spheres imagination may be given free rein, since here no standards exist by which the limits of possibility can be fixed. Moreover, a safe retreat can always be found, in the event of a challenge from the critically minded, in the fact that no one can say just *what* might or might not happen within these realms.

The disposition to accept the most *dramatic* rather than the *simplest* explanation in connection with phenomena still somewhat in the shadow, can be accounted for only on an emotional basis. Consider, for example, the belief in mental telepathy. This belief may be founded on no better evidence than that two individuals happened to think of the same thing at the same time. Rather than pass up the event as a coincidence, they prefer the dramatic inference of mental transference, and present this as the most plausible explanation. Once this interesting concept has been entertained and accepted, the flimsiest circumstance may be seized upon as further evidence. That beliefs of this kind are strongly charged with emotion becomes apparent in the feeling likely to be displayed in the event of a challenge.

The belief that dreams come true and have premonitory significance is doubtless of similar origin. For the believer, the many dreams which do *not* come true are much less significant than the few which happen to show some slight correspondence with actual facts.

It is because the ordinary run of life tends to be such a prosy affair that man becomes motivated toward more eventful and more dramatic existence, and that when left to himself he should tend to construct other worlds more adequate to supply his emotional needs. It is for the same reason that primitive races in their mythical accounts should have tended to present us merely with reconstructions and dramatized versions of the world as known to them. Such reconstruction or dramatization is perhaps most apparent in the myths relating to spiritual forms of existence, or spiritual worlds, usually conceived to exist beyond the physical and material world. But while patterned after the known world they are conceived either as ideally good or as ideally bad, as Nirvanas and Valhallas, or as Sheols and Niflheims.

Then, as now, all that was necessary in order that elaborate tales and highly dramatized accounts might arise was that some imaginative soul should furnish a theme and start a fiction. Appropriate elaboration followed naturally in the process of retelling. The devil, for instance, once presented as a creature combining the characteristics of man and of beast soon appeared in the now conventional form of an individual with evil countenance and supplied with suggestive bestial appendages, horns, forked tail, and cloven hoofs.

THE DESIRE TO KNOW CAUSES

But there are other conditions motivating man's projections within ideal spheres than the desire for more dramatic existence. Equally important has been that very pertinent disposition known as *curiosity*. All men are curious, all are interested in the cause and origin of things. This is as true of the savage as it is of the civilized, as true of the child as it is of the adult. Is curiosity then an instinct? Hardly. The fact that a trait is universal does not make it instinctive or inborn. It may be a trait fostered in all men alike because of certain conditions uniformly present in their environment. What conditions, may we say, have been present with sufficient regularity to account for man's disposition to be curious, for his desire to know causes? Let us consider some developmental features.

Even primitive man in his contacts with nature must have observed that a certain continuity or succession existed between events. He must have noticed that just as his own actions were accompanied by definite effects, so, too, the action of other forces and objects led to equally definite and determinable effects. It was out of such observations that the concept of *cause* arose, the concept that events in nature are not fortuitous or accidental but must have definite antecedents. But while observations such as these might lead primitive man to think that back of every event there had to be another event, the limitations of his mind forbad that this go on indefinitely, and seemed to require that *some* time there must have been a beginning, a *real* beginning, a time when objects and events did not presuppose other objects and events; in other words, a *creation*, or, as the philosopher would put it, there must have been an original cause, a Cause of Causes.

The observation of uniform succession, or of the tendency for certain things always to lead to certain other things, not only gave rise to the concept of cause, but also to the concept of *law*, since law is not an objective thing but merely a verbal formulation describing uniform succession, as, for instance, the regular movements of the heavenly bodies or the effects of interaction of one object with another or one force with another.

Man became interested in causes, in laws, in natural sequences, because knowledge of these invested him with power and with ability to foresee events. Through his knowledge of causes and of laws he gained an instrument of environmental control.

Thus we see that man's desire to delve and to explore, or, in other words, to be *curious*, has had a natural history. It has grown out of his experience with natural sequences and with objects and events which stand in the relation of cause and effect to each other. The valuable results obtained from knowing and observing such sequences created in him a passion for further exploration, and even led him to seek explanations and to assign causes in connection with phenomena not yet under observation. His attention being called, let us say, to a given phenomenon for which no obvious reason seemed to exist, he was impelled to invent a reason and assign a cause, sometimes a very plausible one, and sometimes merely one which appealed to him. From this, the myth took its beginning. And, while the inventor may have been aware of its fictitious nature and highly sceptical of its value, no such misgivings were likely to encumber the minds of those who retold and amplified the story.

HUMAN AND ANIMAL SOULS

From the above analysis it seems likely that a good many myths originated as explanatory fictions, invented for the purpose of assigning causes where causes were unknown. Primitive man, as we have seen, was curious. The requirements of his life fostered this attitude. There was much in his environment to puzzle him, there were endless events and circumstances for which he could see no reason. Most of all he was inclined to wonder about his own life and existence. Life, as such, what was it? What was the difference between a living body and a dead one? If life was *something*, then, what became of it at death? And just exactly what happened when he became sick, or was overtaken by disease? Was it the visitation of an evil spirit? Or was it, perhaps, punishment for wrongdoing? And what of dreams? Were experiences in this state *real?* Were the things seen *actual?*

For these questions the savage found a satisfactory answer in the concept of a soul, a spiritual double, which was able to leave the body during sleep, and which left it for good upon death. This idea was one with appeal and one to which every people on the face of the earth has clung with tenacity and with fervor.

But if man were possessed of this spiritual double, this soul, then what was it like? Again, the answer seems to have been found in dreams and in visions. In these, individuals appeared after the shape and form of their material bodies. And so, it appears, the concept of a ghost soul arose, an apparitional form, the image and likeness of the body.

No sharp distinction between himself and other creatures seems to have been recognized by the savage.

All animals were possessed of souls after the same manner as the human species. Did they not show those very characteristics which he had attributed to the soul, life, will, judgment, and the tendency to appear phantom-like in dreams?

To primitive man all these ideas and beliefs were very real, real enough to be acted upon and backed up by deeds. More than ever this becomes evident in his burial rites. The death of a warrior or a chief called for the execution and burial with him, not only of his horse and his dog, but his wives and his slaves, in order that their spirits might serve him in Valhalla or in the happy hunting grounds. From Grimm's "Verbrennen der Leichen" we learn that as late as the fourteenth century the Livonians, in order to make adequate provisions for their dead chief in the spirit world, caused to be burned with him the men, women, and slaves of his household, as well as his sheep, oxen, weapons, implements, and utensils.

The idea of an absolute psychical distinction between men and animals for which many are inclined to argue today is of comparatively recent date, being first introduced by the religio-philosophical systems of the Middle Ages. The theologians of this period, in the interest of the all-powerful Church, undertook the arduous task of rationalizing the inconsistencies contained in the traditional accounts. They had accepted the ancient doctrine of the soul and in their elaboration of it had made the soul the basis of their belief in immortality. But to allow that animals had souls conflicted with their manner of dealing with animals and with the account of special creation recorded in Genesis. But, having denied to animals the special attributes possessed by man and requisite to immortality, a basis was required for their distinction. This was found in the assumption that man was a *free agent*, moved, not by instinct, but by the light of reason. While man was rational in his conduct and in his aims, animals, as Descartes put it, were unreasoning and machine-like in their every act. And even until this day a conflict centers about these assumed differences.

THE DIRECTING INFLUENCE OF FEAR

All who have been through some very stirring or shocking experience know how hard it is to rid the mind of the images and scenes associated with the event. The powerful effect of such experiences on the nervous system accounts for the lasting and vivid impressions made on the mind, and for the ease with which these impressions may be revived or reenacted in the imagery of our sleeping and waking hours.

When emotional experiences create dispositions such as these it is not strange that the objects about which they center, usually objects of fear or of desire, should so clearly be mirrored in the artistic and mythical creations of man. Nor is it strange that the dramatized versions of ideal and spiritual existence should bring into prominence the things most coveted and most feared by man. It is singular enough that in these imaginary constructions fear should be given a place of equal importance with desire. Some have even gone so far as to say that fear is *more* important, and that, in fact, fear motivation is basic to all mythical and religious concepts. (Fear, and not devotion, they would say, determines the attitude of worship before the symbols of the deity.) It is fear of death and annihilation, and not the desire for immortality, which inspires the belief in spiritual existence and which causes men to prostrate themselves before the Powers believed to be in control of their destinies. As a matter of fact, the relation between man's aspirations and fears is so close as to make it impossible to determine *which* is primary. Hopes and aspirations could not be felt, could not be real, except as the possibility of fear were real. We could not be stirred by the possibilities of success if there were no possibilities of defeat. As hope is intensified, so must fear be intensified. If hope diminish and pass away, so must fear, or, as Milton would have it, *where no hope is left, is left no fear.*

FEAR OF THE ELEMENTS

Stories of terrible floods and deluges destroying all life on the earth are found among the tales and legends of every people. The similarity in these accounts has been regarded by some as evidence that such floods have actually occurred. It would be much simpler, however, to suppose that a common fear aroused by occasional inundation of wide areas following prolonged rains formed the basis for most of these fabulous accounts.

Primitive man's fear of the elements and of thunder and lightning, is, of course, well known. For him these events were shrouded in mystery, and, for that reason, usually ascribed to supernatural powers. When disaster followed in their wake this was usually looked upon as punishment for sin or wrongdoing. The story in Genesis is one of the most complete of its kind. It adds an interesting touch of drama by introducing the rainbow as a feature of the original event, and by supposing that it had been placed in the heavens as a sign that such wholesale destruction by water should not again occur:

> And God said, This is the token of the covenant which I make between me and you, and every living creature that is with you, for perpetual generations: I do set my bow in the cloud, and it shall be for a token of a covenant between me and the earth. And it shall come to pass, when I bring a cloud over the earth, that the bow shall be seen in the cloud: And I will remember my covenant, which is between me and you, and every living creature of all flesh; and the waters shall no more become a flood to destroy all flesh. And the bow shall be in the cloud; and I will look upon it that I may remember the everlasting covenant between God and every living creature of all flesh that is upon the earth.

FEAR OF ENGULFING MONSTERS

There is perhaps no scene more horrible to witness than that of one creature swallowing or devouring another. Particularly is this true when the creature consumed is large enough as to leave no doubt of the suffering endured in the act. Vivid impressions of such scenes and fear lest such an eventuality should befall themselves may account for the frequency with which tales depicting the horrors of engulfing monsters are found in legendary history. The Biblical narrative is representative of these stories. Another familiar example is that of Little Red Ridinghood, the modern version of which has toned down some of the more gruesome details.

In most of the older mythologies the monster was described as a huge fish. With the Orientals it was a serpent or a flying dragon. The story usually begins with a description of the dreaded monster, followed by an account of its reign of terror and destruction. The climax is reached when the hero of the tribe by dint of strategy or of courage slays the monster.

In North American Indian mythology the story is told of the chief Manabozho who, while angling for the King of Fishes, was unexpectedly swallowed, canoe and all. Boldly Manabozho began an attack on the fish from his place within, first, however, setting the canoe across its throat in order that he might not be cast out. With his war club he struck at the monster's heart until it ceased to struggle and was cast up on the shore where the gulls pecked an opening for him to get out.

The ancient myth of Perseus and Andromeda, or of Herakles and Hesione, is of similar character. One version of this story relates that when the Trojan king, Laomedon, had bound his daughter to a rock by the sea as a sacrifice to Poseidon's destroying sea monster, Herakles rescued the maiden by springing full armed into the fish's gaping throat. After days of hacking he came forth hairless from its belly. Tylor, in his "Primitive Culture," states that this story is of Semitic origin and that the early Christian paintings of Jonah and the whale were modelled after the Greek sculpture of Adromeda's monster.

PORTENTS OF THE HEAVENS

The terror which smote the heart of primitive man when made to witness eclipses and other unusual happenings in the heavens can hardly be realized by modern man freed, as he is, from the fears and superstitions which dominated his remote ancestors. Inoculated with strange beliefs regarding the origin and significance of the heavenly bodies—their rôle as deities or as the servants of deities—it is not strange that he should have been filled with dismay when these bodies, whose fixed behavior he had come to regard as the foundations of the universe—without variableness or shadow of turning—should suddenly and unexpectedly change. Little wonder that he should have beat his breast and offered up prayers for his delivery.

The disturbing power of such changes is a matter of historical record. Three of the Gospels describe the fear and consternation which filled the people at the time of the crucifixion when the sun was darkened, the sky overcast, and the veil of the temple torn asunder with the quaking of the earth and the blasts of thunder which rent the sky. To the followers of Jesus no more fitting, ominous, or salient rebuke to the slayers of their Lord could have appeared than just these.

As late as 1654, we are informed by Tylor,

> Nuremberg went wild with terror of an impending solar eclipse; the markets ceased, the Churches were crowded with penitents, and a record of the event remains in the printed thanksgiving which was issued (*Danckgebeth nach vergangener höchschädlicher Sonnenfinsternuss*), which gives thanks to the Almighty for granting to poor terrified sinners the grace of covering the sky with clouds, and sparing them the sight of the awful sign in heaven . . .

The eclipse remained an omen of fear almost up to our own century, and could rout a horror-stricken army, and fill Europe with dismay, a thousand years after Pliny had written in memorable words his eulogy of the astronomers; "Those great men," he said, "and above ordinary mortals, who, by discovering the laws of the heavenly bodies, had freed the miserable mind of men from terror at the portents of eclipses."

CHAPTER IV

WHAT STRONG EMOTIONS MAY DO TO US

Special Cases of Emotional Disturbance

NATURE'S SOUNDING BOARD

It is an obvious yet fundamental fact that an individual seeks pleasure and avoids pain; that he is attracted by things which satisfy and engages in activities which bring pleasure; that he avoids objects and situations which are painful and courts those which satisfy his desires.

Nature has implanted in us these demands and these cravings, and holds out to us the rewards of pleasure when we follow their promptings. Pleasure and satisfaction are our returns when we fulfill nature's functions, when we do the things which preserve life and prevent extinction. Nature has colored our activities, some pleasantly, some unpleasantly, in order that she may have a means of directing our behavior and controlling our interests.

Thus, with every action and with every adjustment, there arises from within feelings of pleasantness or unpleasantness. These feelings, and their stronger expressions, the emotions, have been instilled in us as a sort of sounding board resonant to the changes and conditions of our environment. The objects and stimuli of our environment play on this sounding board, and we respond according to the pleasantness or unpleasantness which belongs to the experience. Through this vibrant mechanism nature determines the course of behavior—it points the way, the way of righteousness and the way of iniquity, the way of salvation, and the way of extinction.

WHAT LIFE WOULD BE WITHOUT EMOTIONS

Apart from emotions, apart from the capacity to *feel*, life would become meaningless, virtueless, sinless. It would become an incomprehensible round of meaningless change, without plan and without significance. There could be no good or bad, no high or low, no better or worse. All would be on the same level and of the same order. There would be nothing to appeal, nothing to stir or to move the individual. He would be without a guide, without purpose, and without ambition.

To realize how true this is we need but look at some of the poor creatures who have lost the capacity to feel, and who have been confined to institutional life because nature's sounding board has been broken. In such cases the mind may still be intact, without impairment or reduction of mental functions. But the significant touch, the warmth of feeling and of contact, the thing which gives life zest and makes it worth the living is gone. An individual so deprived may recognize his parents, his wife, and his children; but he is moved by no feelings, by no attractions, and no repulsions. His wife may weep, but tears do not stir him to sympathy. He is not hard hearted, he is not soft hearted; he is non-emotional.

Just what emotions do to us, and just what part they play in ordinary life, may perhaps best be seen when we view their expression under abnormal conditions. For this purpose we shall review a few typical cases in which some unusual experience or some special physical condition has served to project the emotions, and to throw into relief their influence on conduct and behavior. Having viewed them thus we may gain a clearer conception of their influence under normal conditions.

HYSTERIA AND ITS RELATION TO UNSATISFIED STATES

The life of every individual centers about the satisfaction of certain demands, cravings, and needs, most of which arise out of our inherited constitution. Thus, there are the demands for food, for sex, for self-expression, for social recognition and distinction, and for a great many other things essential to life and its maintenance.

Now, when these demands fail of their normal expression, and when untoward conditions of the environment stand in the way of realization, there is apt to be difficulty. Particularly is this the case when the frustrated desire or emotion is a major one. An emotional crisis may arise which the individual may be able to weather without suffering any serious defect. But there is also the graver possibility, as numerous cases show, that such a crisis may result in more permanent injury to the character or personality.

In most instances the frustration even of a major drive merely results in a temporarily unsettled emotional state. The individual seeks new interests, and the energy of the drive is diverted into new channels of expression. However, not all individuals possess this capacity to resist shock, or this capacity for readjustment. There is always the individual, as some of the cases we are about to consider will show, who, when confronted with obstruction, will resort to all sorts of childish and makeshift adjustments of the type commonly known as hysteria. Or, if not this, they may become morbid, seclusive, given to rationalizations, to delusional systems, and to the building up of elaborate systems of defence.

Typically, it is in the emotionally unsatisfied state that the hysterical symptoms appear. The individual is thwarted or opposed in some design. A situation arises which he cannot handle. The result is an hysterical attack which may express itself in a siege of uncontrollable laughing or weeping, in a sudden attack of illness, in fitful behavior, or in convulsions with violent tossing of head and limbs in utter defiance of ordinary propriety. These reactions may be regarded as a reversion to the childish level of adjustment. In fact, they remind us very much of the behavior of the spoiled child finally brought face to face with unyielding opposition to selfish demands.

Hysteria, particularly of this form, is much more frequent among women than among men. This is equally true of other forms of emotional disorder. Within the entire range of manic-depressive psychoses, in which the chief difficulty is emotional rather than mental, there are about twice as many women as men. A certain constitutional weakness, and a certain inability to stand up under severe emotional strain, would seem to be the chief reason for this difference.

The influence of environmental factors is also in evidence. In hysteria the greater restraints which society places upon women than upon men are always potential influences. It is altogether possible that as the freedom of women increases, and as the restrictions within the sphere of sex are reduced, there may also be a marked lowering of frequency, so far as hysteria is concerned.

UNSATISFIED SEX DEMANDS

Of the drives which stir man's emotions, of the forces which move him to action, sex is second to none. The very restrictions and limitations which society has built up around this drive have done much to give it this supremacy. Its very magnitude and strength have, in turn, been responsible for the suffering, the anxiety, and the perverse expressions which have followed in its wake.

It is hardly surprising that the restriction or the denial of so powerful a drive should frequently have serious consequences. In the poorly integrated and emotionally unstable individual it very often results in perverse expressions, in hysterical symptoms, in excess prudishness, and in other eccentricities of manner and behavior. On the other hand, if properly managed, the energy of the drive may very well be sublimated, *i.e.*, redirected into more socially approved channels. Under such redirection, it has provided the stimulus for some of the highest expressions in both art and literature.

The case of Dorothy, reported by Pressey[1] is a good illustration of what may happen when a girl of hysterical temperament is unable to find an adequate outlet for a major drive. Throughout her childhood Dorothy had been subject to fits of temper and violent outbursts. The slightest provocation was sometimes sufficient to cause her to scream, to fight, and throw herself about. From adolescence on she showed marked interest in boys. Her dress became showy and her manner calculated to arouse masculine attention. But, despite her obvious interest, she remained unpopular with the opposite sex.

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[1] Pressey, S. L., and L. C. Pressey, "Mental Abnormality and Deficiency," p. 121, The Macmillan Company, 1927.

Her failure to attract attentions of an acceptable order resulted, at the age of twenty, in the formation of a variety of symptoms best described as hysteria. She began to complain that men were annoying her. Love letters containing the most passionate appeals and presumably written by male admirers were displayed as evidence of the extent to which she was being pestered by unwanted suitors. She threatened to join a nunnery, or a *monastery*, as she called it. As a means of "protection" she finally joined a Y.W.C.A. Here she received more letters, among others, one written by a girl friend asking her to return to the "old life." But despite these temptations and forces endangering her virginity, she was determined to remain virtuous. However, in view of the constant danger of assault, she insisted on being accompanied whenever she left the Y.W.C.A.

One evening she received a letter from a man threatening her in the event she refused to submit to his amorous appeals. With this she became very much afraid, went into a fit of screaming, and lost consciousness. Appropriate medical aid soon revived her, but there persisted an hysterical paralysis of the left hand, which was not relieved until a clinician, in whose care she was placed, had brought about a complete confession. The lovers had been imaginary, the letters had been faked, and, for the purpose of disguise, had been written with the *left hand*. The use made of this hand had been responsible for the functional paralysis which developed at the time of her seizure.

After this she talked freely of her troubles, revealing the factors which had brought on her condition. It was apparent that her erotic nature had, from the beginning, given a sexual trend to her ideas and interests. She had always wanted lovers, but had never been sufficiently attractive to win favor with the opposite sex. As a substitute outlet, she had resorted to daydreaming and to imagining herself the center of masculine attention; in fact, as having actual episodes with men. She had further dramatized the situation by framing love letters which were made realistic by the disguise in handwriting and the signing of a man's name. The hysterical outbreak and the functional paralysis resulted from the failure to effect a compromise between her desires and an unfavorable environment.

MORBID FEARS RESULTING FROM UNSATISFIED DESIRES

Offhand, Dorothy's fears of men and fears of attack appear affected and lacking in genuine quality. But the hysterical temperament is always puzzling to the individual of more balanced constitution. We must wonder as to how emotions, if simply feigned, could have the disturbing value which they apparently had for Dorothy. But whether simulated or real there can be no doubt but that the expressed fears fundamentally represent objects of desire—she desires masculine attention and finds reasons for attack and assault. Subconsciously, the thought must give her satisfaction. For if, to the eyes of men, she can become an object of desire, she must be physically attractive.

We are always seeking means of self-consolation, always, too, seeking a way to cover up secret longings. To express a fear, therefore, of a thing really desired, serves to conceal from public view demands which cannot be satisfied or which lack social approbation. We should not take people's fears too seriously, particularly, when there is evidence of social motivation. Indeed, most people are aware of this. No one takes seriously the fears of the typical old maid, fears about the man hidden under the bed, worries lest someone be lurking in the closet ready at any moment to pounce upon her.

Fears of the obsessive variety may be traced to a similar origin. When a fear becomes an obsession it is much more disagreeable and persistent. It is, in fact, the *persistent* quality of the idea or the fear in the absence of any real cause which makes it an obsession. Such persistency, in turn, in the absence of any real danger is itself evidence that the cause of the fear is actually an unsatisfied desire. That the desire expressed in the obsession should take on *symbolic form*, as frequently happens, is further evidence of the same. The direct expression being impossible, or being without social approval, satisfaction is sought in indirect or symbolic expression.

Pfister cites a case which well illustrates the way in which a major urge denied its normal outlet results in an obsessive fear. A woman who had had visions of a home and of children finds, upon marriage, that her husband is impotent, and that her long cherished hopes cannot be realized. This unexpected revelation is quite a blow to her. She becomes irritable and nervous, and complains of pains in her abdomen. The absence of any physical condition which might account for these pains indicated that they were purely imaginary. The idea that "burglars were breaking in through the garden" becomes an obsession with her and seems to give her constant trouble. According to Pfister, this fear of burglars expresses her wish in symbolic form, *breaking in through the garden* being the symbol of sexual intercourse. This typically Freudian account is not altogether improbable. It is the more significant if, as its author tells us, the fears and obsessions vanished when the husband's impotence, through a fortunate circumstance, lent itself to treatment.

SUBSTITUTE SATISFACTION FOR THE TENDER EMOTIONS

An elderly woman suffers a severe mental shock following the death of her pet cat. The shock leaves her mentally deranged and she is taken to a hospital for care and treatment. The neighbors relate that a number of years before a series of unfortunate experiences had "made her lose all faith in human beings." Having barred from herself all contact with her social environment, she was left without an object for her highly affectionate nature. As a substitute outlet, her starved emotions had turned to the cat as a new source of satisfaction. From then on this animal had been showered with every attention its selfish nature might demand. Its death had been more than she could bear. It meant the removal of her last source of comfort. With this her grip upon life and reality failed.

Recourse to animals and pets as objects of emotional fixation and satisfaction is not at all uncommon in our day of many childless marriages. A woman with the tender feelings natural to her being, and designed by nature for the care and protection of a helpless infant, is apt to find her life incomplete when left without an object of emotional fixation. If married and without children, her husband may become such an object. If single, she must find other means. Dogs and cats may prove very satisfactory, particularly dogs, although in fiction it has been the custom to make the cat the special favorite of the old maid. The extent to which dogs may provide vicarious satisfaction for the maternal instinct is very apparent when a woman begins to employ the same words and expressions of endearment which she might use with an infant.

A more serious form of substitute functioning occurs in so-called *bestiality*, a perversion in which an animal becomes an object of sexual gratification. That this perversion is not a new one is evident from the fact that it is forbidden in the Old Testament.

THE SPOILED CHILD

The natural bent of women manifests itself chiefly in the greater strength of the tender emotion. Women are much more sympathetic and more easily stirred to feelings of compassion. This is evident, from their greater interest in welfare work, in social uplift, in orphanages, S.P.C.A.'s, etc. There may, of course, be other motives back of these activities, motives both social and economic. But these motives could hardly account for the greater ease with which women's interest in such activities may be aroused as compared with the relative indifference of men. The reason for this greater susceptibility on the part of women is evident when we view the biological function of the tender emotion. Its purpose is obviously that of prompting the parent, and particularly the mother, to the acts of love and kindness needed by the infant during the early years of his life. The tender emotion does not permit the parent to witness suffering in the infant without the impulse to administer to his needs.

But, as in many other instances, the wise provisions of nature may fail in their objective. The fond parent may continue to indulge the child and to shield him from contacts which otherwise might have a molding influence on his character and personality. The child forms the habit of running to his mother for protection and comfort on the slightest provocation. Obviously, conditions such as these do not favor the building of a strong character.

The hysterical outbursts of the adult in the face of untoward conditions clearly reflect the personality of the pampered child, now grown to manhood or womanhood, but reverting to the infantile mode of adjustment. Never having been made to face the disagreeable, the individual lacks the courage, the moral stamina, to bear up under ordinary adversity. Too weak to face the facts, he develops a variety of emotional disorders, fears, anxiety states, obsessions, delusions, hypochondrias, and other ailments common to hysteria.

THE CASE OF ALFRED

Ignorance is the greatest single cause of sin and suffering. Could the average parent but see the potentialities for future trouble which lie hidden in many seemingly innocent acts with which he would smooth the way for his child and shield it from discomfort, these well-intended acts would never be carried into effect.

English Bagby[1] presents a very vivid picture of Alfred, a boy whose home environment had favored the development of a self-appreciative and highly egocentric disposition. His mother, who had been left with the entire responsibility of training him, did not differ from the average too-fond parent in her desire to shelter her boy and protect him from anything and everything of a disagreeable nature. Her discipline had been poor, and for the most part Alfred had his own way. He was never permitted, however, to venture unattended beyond the confines of his home, nor to play with the children of the neighborhood. His mother explained to him that these children were hardly fit company, and that he was different from them in a highly desirable way; he was of a finer constitution and of rarer sensibilities as evidenced from his "unusual artistic appreciation." Alfred took this seriously and began to show zeal in writing verse which he displayed before visitors in the home. Their compliments convinced him the more of his rare artistic talents.

To quote Bagby,

> At the age of twelve, he was sent to a public school for the first time. By reason of the fact that his contact with boys of his age had been so restricted he was poorly qualified to make a social adjustment to his fellows of the classroom and playground. His speech was over-nice, his manner was too much that of an adult, and he had an atti-

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[1] Bagby, English, "Psychology of Personality," p. 118, Henry Holt & Co., 1928.

tude of self-appreciation. In short, he was irritating and he was immediately met with such intense persecution and badgering that he developed a typical inferiority complex.

To prove his worth and as a way of compensation he again found recourse in his "rare artistic talent," and, on one occasion, as a sophomore in college succeeded in attracting very special attention by expounding, *and putting into use*, a new theory as to how the hands should be held in walking. He insisted that the common practice of permitting the arms to swing is undignified and unæsthetic; and that a more impressive effect is got from holding the hands rigid and slightly in front of the body. He began to memorize portions of the writings of Mencken and Wilde and became very adept at expressing the notions of these two men in ordinary conversations, securing thereby notable effects. He also ventured into literature on his own account . . . wrote *vers libre* . . . painstakingly copied on very expensive Japanese vellum, and visitors to his room were given the manifest privilege of listening to his reading of his own compositions.

The greatest amount of comment was aroused by his actions in connection with a party he gave. To this affair a great many persons were invited and an enormous store of refreshments purchased. On the morning of the event, however, a friend was asked to take charge and act as host. Alfred said that he would not be present himself, that he intended being out of town. Some days later it was discovered that the absent host had missed his own party in order that he might go to a nearby town to see a moving picture in which, as far as could be discovered, he had no special interest. In explanation he said he had felt that any picture would be more entertaining than a roistering party.

After the signing of the Armistice (Alfred had been in the service overseas), he married a young Spanish woman before returning to America. This was not strange in itself but, although his wife lived in this country for seven or eight years, she has never been permitted to learn the English language. In fact, she is not even able to order the family groceries and is otherwise inconvenienced. Conversations in the home are carried on in any one of a number of different tongues: French, German, Italian, Spanish, Polish, and Russian. Furthermore, if a guest is fluent in any one of these, he will be forced to listen to a discourse in the others.

THE INFERIORITY COMPLEX

According to the original meaning of "inferiority complex" an individual so afflicted is not necessarily the timid, withdrawn, shrinking, never-daring individual. Such an individual doesn't have a *complex*, he is just plain *afraid*. He is a shy and faint-hearted individual. In a strict sense, to be afflicted with this direst of psychoanalytic complaints one must be morbidly conscious of some inferiority, and must try, as in the case of Alfred, to compensate for this felt inferiority by assuming the airs and manner of conscious *superiority*, that is, one must try to reduce these disturbing feelings of inferiority by assuming airs and manners to the contrary. Thus, the individual suffering from this malady really wants to be superior, but is too keenly aware of his inferiority, and so overcompensates through affected behavior.

Having gained a mistaken notion of the inferiority complex, the popular writer has further overreached himself by introducing the "superiority complex." Such a complex he would attribute to the conceited and the boastful individual. In reality, what he now conceives to be a superiority complex is actually an *inferiority* complex. The boast, the swagger, the ostentatious display, are the camouflage with which the timid individual conceals his feelings of inadequacy. The truly courageous, the truly able individual, does not need to put on airs to make an impression.

FEELINGS OF SOCIAL INFERIORITY

To gain social recognition or distinction, to be in the limelight, these are the things which lie nearest the heart of some people. Should they meet with failure, should conditions be present which force them into a position of inferiority, they are apt to develop affectations of speech, manner, and behavior, as reactions of defense. With the frustration of their desires matters of social import gain even greater significance, and are taken altogether too seriously. Personal implications are seen where they do not exist. Every slight, every neglect, has its unforgettable sting. That such matters can prey on an individual's mind is itself evidence of underlying feelings of insecurity. His injured feelings may find an outlet in refusing to "play the game," or in obstructing the work in progress. Or he may withdraw, assume the air of calculated nonchalance, and treat the whole matter with apparent contempt. In any or all of these defense mechanisms we may see the backfire of a too vulnerable personality.

Whatever the nature of the overcompensation, it should be regarded as an attempt to bridge the gap between the desired and the real. Lofty manner or affected behavior is the overcompensation for unsuccessful enterprise. An air of brusqueness may simply be a defensive wall built around an essentially timid personality. The bold front of the bully is designed to conceal his essential cowardice. The prim behavior of the prude may conceal fancies and urges of a highly erotic nature.

OTHER MEANS OF BOLSTERING A WEAK PERSONALITY

There are still other signs by which we may recognize the inner conflicts of an individual subject to feelings of inferiority. As a personality type he is oversensitive. He takes criticism poorly. He refuses to accept the truth, and fortifies himself behind an affected and pretentious exterior. To reduce the tension of his inner conflict, he pushes himself to the front, argues, blusters, and seeks every means to bolster up his personality. He is interested in competition, but only, as in the case of the bully, where competition is likely to be successful. He cannot countenance the possibility of defeat. He is a poor sport, and if he loses, he is inclined to rationalize his defeat. He complains of unfairness, and resorts to such alibis as may have the desired sustaining quality.

These traits remind us very much of Alfred, who was always seeking the limelight, always contentious, always inclined to regard his associates as possible rivals. He was in constant fear lest someone discover the true self concealed behind his outward show of personal strength. Every opportunity was seized to display special talents which he had developed for no other purpose than to impress his social surroundings. He gained familiarity with a number of foreign languages, but always insisted on using the one with which his guests were least conversant. His fears of personal reduction prohibited participation in fair competition. His cultivation of sports was limited to those in which others took no interest. Ping pong was a special favorite. In this game he developed considerable skill, and all comers were persuaded into playing with him. His ability to win afforded him much satisfaction, even though his opponent might be a novice at the game.

WHY NERVOUS HEADACHES

A headache is the time-honored excuse of the gentler sex when confronted with an uninviting or disagreeable situation. The indisposition makes its appearance at a convenient hour, just before the unpleasant engagement, in the presence of opposition, or when someone happens to cross them. With the failure of a desired objective, a particularly bad case develops, and the patient may be forced to go to bed.

It is frequently difficult, as in the case we are about to describe, to determine the seriousness of such ailments. To ignore them, and, with a smile or a shrug to pass them off as "purely mental," may be a mistake. We know that adverse mental states alone are able to produce serious organic disturbances. Mental conflicts, irritation, or annoyance, tend to disturb the digestive functions, and, in turn, to produce headaches and other complaints.

That mental states should tend to influence physical states is not strange since mental states are really brain states or brain reactions. As a central organ of control the brain is in intimate contact with all vital organs and functions. The fibers which reach out from it to these internal organs are responsible for the changes in heart beat, digestion, and glandular secretions which result from particular mental states, from mental shock, or from fright.

Elizabeth, whose case is described by Bagby, was subject to headaches and digestive complaints whenever she had to meet a social engagement. The mere anticipation of such an event was sufficient to bring on an attack.

She was really a very intelligent and not at all unattractive girl, but for some reason had been neglected almost entirely by her mother in favor of her older sister. Owing to these conditions she had been forced to seek satisfaction for her natural affections outside the home. In so doing she developed a strong attachment for a girl in the neighborhood. Their friendship soon became so close that they spent most of their time together. In the absence of wider social interest this condition proved disastrous when her friend, over some trifling matter, broke off their relations and began to make false accusations and to prejudice the children of the community against her.

In the absence of any source of comfort—her mother and sister already having failed her, and now her best friend—she was made to feel the hostility and persecution of the other children very keenly. She became seclusive, shy, and fearful of the opinions of others. Worst of all, she began to develop intense feelings of inferiority.

From then on Elizabeth began to avoid all social contacts, and found it difficult to enjoy parties and social gatherings. She became nervous beforehand, and during the party would be too self-conscious to take part in anything. On one occasion, while preparing for a party, she became very ill with a bad headache and had to go to bed. Following this, her mental and physical symptoms on such occasions were intensified. Almost invariably the approach of the time to dress would bring anguish, internal distress, and pains in the head.

It is apparent that the disagreeable experiences which Elizabeth had been subjected to in her social relations had caused a set of internal fear responses to become linked with such situations. The very thought of the coming party made her nervous. The anticipation of possible hostile reactions from other girls increased this tension. The restlessness and loss of appetite which developed on such occasions were the natural result of her fears and inner tension. But the most persistent of her ailments were her headaches, the severity of which increased as the time for the dreaded event approached. To rid her mind of these disturbing ideas she would read excessively, and this might have been a contributing factor to her headaches.

The certainty with which her headaches would come on when she was about to face a disagreeable situation might indicate that they were of an hysterical nature. That is, while they may at first have resulted from true organic difficulties brought on by fear and tension, they may later have become a means of controlling her social environment. As Bagby observes,

> . . . whenever the patient begins to complain of being ill, her position in the household is immediately changed. The members of the family suddenly seem to become aware of her and perhaps to regret their former indifference. At any rate, she is caressed and petted; she is assured that she is significant and loved; and she is told that she is a victim of persecution. Thus, she is aided in the maintenance of a rationalization habit to the effect that she is not after all inferior, and this is reductive of the emotion with which she contemplates her social relationships. Also, and more significantly, the headaches make possible and reasonable a seclusive type of defense reaction.[1]

WHAT EMOTIONS MAY DO TO OUR APPETITES

Most people are fond of chicken. Yet here is a man who has a very strong dislike for it. In fact, he maintains that "just the thought of it is enough to make him sick." However, if eaten in disguised form, and if unaware of its presence, chicken doesn't bother him. This shows that his difficulties are not organic, but mental and emotional. How did they arise?

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[1] *Op. cit.*, p. 153.

It appears that on a certain occasion, following a chicken dinner, he had developed a bad case of nausea and indigestion. While he was in this condition, he took stock of what he had eaten, and decided that the chicken was the cause of his trouble. By fixing his attention on chicken while in this condition, the thought of it became associated with his stomach trouble. More than that, the brain reaction underlying this thought became linked with his internal state. Thus, he had established a *psychoreflex*, by means of which the thought of chicken alone would suffice to bring on internal changes of a disagreeable variety.

DISGUST CAUSING INTERNAL UPSETS

A medical journal gives the following case, which, in many respects, runs parallel to the above. A girl, suffering from persistent vomiting spells is brought to a physician who tries various devices without effecting a cure. He gives the patient a purgative, "pumps" her stomach, prescribes a diet, treats her with drugs, but all to no avail. A psychiatrist, who was also called into consultation, learned from a neighbor that the girl's parents had wanted her to marry a man who was physically offensive to her. Refusal to consider him had made her parents all the more persistent. Scenes and quarrels had followed. After one such altercation which had been precipitated by the expected visit of the objectionable suitor, she became sick, vomited, and had to go to bed. The following evening she vomited again in anticipation of another call. Similar attacks occurred during subsequent weeks whenever he was expected, or whenever her parents renewed the controversy.

Here, again, we have a mental state becoming linked with a disagreeable physical state, and gaining the potency to rearouse this internal state in the absence of the original stimulus, that is, the man who was physically offensive to the patient.

A CASE OF MENTAL ANOREXIA

Following the death of her husband, a woman, whose health in the main had been good, was unable to regain her appetite and became very depressed. She lost weight rapidly and complained that when she would sit down to eat, the food would stick in her throat. She would chew it indefinitely without being able to swallow. When placed in a new environment her difficulty disappeared.

The cause of her trouble had been mental and emotional. Continuing to occupy the same apartment after her husband's death, she was constantly surrounded with objects which served to remind her of him. Particularly was this true when she would sit down to a meal. With his empty seat before her, his image would rise in her mind, and a train of associations would serve to reinstate that complex of memories and disagreeable emotions connected with her loss. A feeling of heaviness would bear down upon her attended by the internal sinking sensations, constriction of the throat, and other symptoms associated with indigestion and a condition of general depression.

DIZZINESS IN BALCONIES

People may show all degrees of emotional sensitivity. Some are hard to move, almost impregnable to the influence of emotional stimuli. Others, again, are too impressionable and over-react to emotional situations. From the point of view of the artist, high sensitivity may be a desirable trait. For the psychologist it is a weakness, since it is apt to interfere with general efficiency.

An individual may be said to over-react when his emotional equilibrium is too easily upset, when matters of small importance continue to prey on his mind, or when emotional reactions to a given situation persist after the emotional crisis has passed. Such oversensitiveness is well illustrated in the cases we have considered above. We shall add still another example.

A man, following an attack of biliousness, attends the opera. During the performance indisposition again overtakes him, and, while looking over the balcony (his seat was in the front row), he becomes very dizzy and has to leave. A week later, this time not bilious, he again attends the opera, and again becomes dizzy while looking over the balcony. This becomes so permanent a state of affairs that he has to give up his very desirable seat. In fact, he finds it impossible to sit in any seat in a balcony with any degree of comfort.

FEAR

Fear is something more than a state. This is apparent when we consider the diverse internal changes accompanying the emotion, such as quickened heartbeat and breathing, retardation of digestive processes, changes in circulation, increased nervous tension, trembling, pallor, and perspiration. All of these internal changes tend to be aroused by the objects and stimuli with which they happen to become associated. Some illustrations may serve to make this clearer.

A CHILD'S FEARS AND NIGHTMARES

There are very few things which *naturally* arouse fear in a child. It isn't *naturally* afraid of dogs or furry animals as is ordinarily supposed. An object must become associated with a disagreeable or unpleasant experience in order to gain fear potency.

The mother of a little girl, age eleven months, was in constant fear lest her child be bitten or otherwise molested by dogs, the truth being, that she herself was very much afraid of dogs. For this reason the child had had no experience with dogs until one day, while playing on the lawn, a big collie approached, seemed friendly, and not at all averse to the hesitant pats of the child. Interest, not fear, was engendered by this shaggy-haired stranger. Their little tete-a-tete had not progressed far, however, when the mother appeared on the scene. With a scream she rushes in upon them, gesturing frantically at the dog which was not slow to make his departure. Her screams and violent reactions not only scared off the dog but thoroughly frightened the child. Henceforth, *she* could not be approached by a dog without an evident show of fear. What is more, she could not even be induced to play with her pet rabbits, whose fur coats apparently served to remind her of the dog.

Another child who had had the unfortunate experience of being bitten by a vicious dog, not only developed an intense fear of dogs, but became subject to nightmares and dreams in which she relived the terrifying experiences of her original encounter. So intense were these experiences that she cried out in her sleep and awakened the entire household.

MORBID FEAR OF RUNNING WATER

Bagby relates the following case:

> A young woman of good heredity developed during her childhood a severe phobia of running water. She was unable to give any explanation of her disorder which persisted without noticeable improvement from approximately her seventh to her twentieth year. Her fear of splashing sounds was especially intense. For instance, it was necessary for her to be in a distant part of the house when the bathtub was being filled for her bath, and during the early years it often required the combined efforts of three members of the family to secure a satisfactory washing. She always struggled violently and screamed. During one school session a drinking fountain was in the hall outside her classroom. If the children made much noise drinking, she became very frightened, actually fainting on one occasion. When she rode on trains, it was necessary to keep the window curtain down so that she might not see the streams over which the train passed.[1]

The fact that the girl might even faint on such occasions shows clearly that the fear is not "just mental." The running water as a stimulus is effective in arousing all those internal reactions ordinarily associated with intense fear. How running water as a stimulus became linked with these internal changes and capable of arousing them we learn from Bagby:

> The mother, the aunt, and the little girl—she was seven years old at the time—had gone on a picnic. Late in the afternoon, the mother decided to return home, but the child insisted on being permitted to stay a while longer with her aunt. This was promptly arranged on the child's promise to be strictly obedient and the two friends went into the woods for a walk. A short time later the little girl, neglecting

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[1] *Op. cit.*, p. 44.

> her agreement, ran off alone. When she was finally found she was lying wedged among the rocks of a small stream with a waterfall pouring down over her head. She was screaming with terror. They proceeded immediately to a farm house where the wet clothes were dried, but even after this, the child continued to express great alarm lest her mother learn of her disobedience. However, her aunt reassured her with the promise, "I will never tell." So at last they returned home and to bed. As the older woman left the next morning for a distant city, the girl had no one in whom she could confide. On the contrary she repressed all thought of her accident and presently she was unable to recall the facts even when a serious effort was made to have her do so.[1]

But her nervous system did not forget it, and, while the incident which had been responsible for the connections involved was forgotten, the recurring stimuli retained their original potency.

FEAR OF HIGH PLACES

The emotionally oversensitive, overreacting individual is frequently inclined to show morbid fear when standing on a height or when looking over a brink. His fear may be considered morbid in the event his position is really one of comparative safety. Ernest Jones in one of his psychoanalytic treatises tells of a young man who, when standing on a height, would grow pale, nervous, dizzy, and start to perspire. These symptoms were particularly severe when the height overlooked deep water. When questioned regarding his state he maintained that, however irrational, he had a fear of falling over, a fear that he might jump over, or that someone might push him over.

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[1] *Op. cit.*, pp. 44–46.

A series of incidents from his past showed how the connections had been established. One day at the age of three, when he had been particularly fretful and given to crying spells, a boarder at the house who had been annoyed by his behavior had picked him up and held him over a cask of water into which he threatened to drop him unless he became quiet.

At the age of seven, a young school teacher had picked him up by the ankles and dangled him over a high wall, threatening to drop him. While the man regarded this only as a practical joke, the child, naturally enough, was seized with terror.

The father of the boy had been inclined to laugh about his "absurd fears," and, in an attempt to recondition him, had made him walk along the top of a wall. The experiment, instead of improving his condition, only made it worse. It would seem probable, however, that repeated performances of this kind made under more favorable conditions might have had the desired results.

Another incident which served to fix the fear reaction, even more firmly, occurred at the age of ten. The boy had been to a village concert with a grown-up friend. The hall was crowded and he had been made to sit on a narrow ledge six feet above a flight of stairs. From this precarious position he had pleaded to be let down. But it was not till his condition became almost unendurable that his request was finally granted.

EMOTIONS IN WAR

The stirring effects of national hymns, of flags, and banners are familiar to us all. During the World War it was not unusual to see people lining the streets strangely moved by the sound of national airs, the marching of soldiers, and the display of standards and emblems.

That the stirring qualities of these stimuli is purely a matter of association and experience is evident from the fact that an individual is not moved by the national emblems and hymns of another country in the same way as by those of his own country.

The singular quality of these stimuli, and the background of experience upon which this quality depends, should help to clarify the peculiar susceptibilities of soldiers returning from the grilling experiences of war. For months and sometimes for years they cannot recall the scenes of combat and of bloodshed without a return of the old revulsions. They shrink even from the mental encounter, they desire only to rid their minds of the lurid events. But it would seem that those ghastly sights, sounds, and odors would live forever. Moments of terror and of horror, of cries of pain and of anguish, the bursting of shells, and the memory of mutilated comrades were too indelibly impressed on the mental matrix ever to be forgotten.

SHELL SHOCK

Too often the days and months of high tension experienced on the front left the soldier in a state of nervous fear and apprehension. Any unexpected happening, a shot, or a sudden noise would startle him and bring out beads of perspiration. Particularly was this true when the stimuli served to remind him of his experience in the trenches. When this condition persisted in extreme form the individual was said to be "shell shocked." As a descriptive term, however, "shell shock" ineptly describes the condition of the patient. It was introduced in the early part of the war by medical men who attributed the emotional difficulties of some of their patients to the concussion effects of high explosives. As a matter of fact all the symptoms peculiar to the shell-shocked soldier might appear in the oversensitive and the emotionally unstable long before they reached the front. To gain a clearer impression of the malady we shall describe a particular case.

A young man, a teacher, and the son of a minister, enlisted shortly after our entry into the war. Emotionally, he was poorly fitted for the strenuous and nerve-racking life of the trenches. He had always been a little too sensitive, too soft-hearted, a little shy and self-conscious, perhaps. During his first experience under shell fire he was seized with fear and broke into a cold sweat. He was horror-struck at the sight of gaping wounds and sudden death. At night he was unable to sleep. If he did fall into a doze, he would suffer from nightmares and "hypnagogic" hallucinations of shells, trenches, and advancing enemies. With each day he became more nervous and jumpy, and was quite unable to eat. His tension increasing and his fear of shells becoming worse, he began to drink as a means of regaining self-possession. Worst of all was the constant inner struggle created by his attempt to conceal from his comrades all outward signs which might betray his fears.

After seven weeks of this his condition became critical, and he developed a typical case of shell shock. He first complained of feeling sick and dizzy. Soon he began to vomit, went into a state of convulsions, and collapsed completely. He was taken to a hospital far back of the firing line. Here his insomnia and nightmares returned. In his sleep he would relive his experiences in the trenches. Shells would come closer and closer, would appear larger and larger, and finally burst right in front of him. The "Boches" were upon him! With a shriek he would jump up, throw himself under the bed for protection, or advance against the imaginary enemy.

It was not merely at night that he would suffer these disturbances. At any time the distant thud of a cannon, the sight of an airplane, a shout, an officer in uniform, or any other stimulus associated with the original grim experience would be sufficient to bring on an emotional crisis. His morbid imagination would convert these stimuli into the tragic spectacles of war, and cause him to relive, if in less intense form, the horrors of the past.

When he returned from overseas and tried to get back to his former duties the emotional seizures continued to come on, particularly when he was nervous and overworked. To calm his shattered nerves he would take long walks at night. On these walks his hallucinatory experiences would return. A wagon by the roadside would develop into a machine of war. Imaginary enemies would seem to lurk behind every object along the way. After retiring, the slamming of a door would be sufficient to wake him from his sleep and cause him to jump out of bed. A full year and a half after resuming his duties as a teacher, an unexpected blast in the neighborhood caused him to collapse and brought on a return of the old symptoms.

There is nothing in these conditons varying radically from the usual effects of emotional shock. In this, as in other instances, the objects and sensory impressions present at the time of the emotional crisis become linked with internal fear responses and tend to rearouse these fear responses after the event has passed.

CHAPTER V

THE PHYSICAL BASIS OF THE EMOTIONS

THE INNER MAN

THE fact that our desires and motives seem to arise spontaneously and from within has been responsible for the belief that the individual is possessed of a special agent of control, or an inner man in whom life and action have potential existence. Acceptance of such an agent of control has been rather general among ancient as well as among modern writers. As to its nature, however, there has been very little agreement. Some have viewed it as a purely psychic affair, or as a sort of spiritual double. Some, again, have tended to identify it with conscience, while still others have regarded the motivating source as a purely functional or physical phenomenon.

In the writings of Paul we find one of the clearest expressions of the spiritual conception. For Paul there is not only the "outward man which must perish," but also the "inward or hidden man which is renewed day by day," and which is destined to live beyond the day of the flesh. A similar conception is presented by Milton in his discussion on "Man's Nobler Part," and "Man's Guiding Principle." For both of these writers the true self, though within the body, is not of the body, and while in control of physical structures is not of their nature.

The conception of the inner man as synonymous with conscience is largely popular, and is not taken seriously by any of the writers either ancient or modern. Such identification is, moreover, something of a departure from the original conception of the inner man. For, whereas the inner man is made to typify the emotive side of our nature, conscience is usually regarded as a principle of restraint. Furthermore, we can hardly assign to conscience any form of unitary existence such as is presupposed in the conception of an inner man. Conscience, if it is anything, is merely the name we apply to that state of uneasiness aroused by an act, or the contemplation of an act, which in the past has had bad consequences. The "prick of conscience" is well illustrated in the slinking and uneasy behavior of a dog following an act which on some previous occasion resulted in punishment.

Those who look upon desires and motives as purely functional are inclined to seek for them a physical basis and to associate them with the action of a specific organ. Thus, Descartes, in his day, was convinced that the true source of motivation was to be found in the pineal gland, a secretory organ located in the middle of the brain. He was of the opinion that, by virtue of its central position, it must have been designed as a special instrument of mental and bodily control. Its secretory functions suggested to him that ideas must flow from it in much the same way as bile flows from the liver. Long before Descartes, Aristotle had asserted that the heart was indeed the seat of our emotions and impulses. For Aristotle the brain was merely a cooling body, a body through which the blood had to pass in order to keep at an even temperature. Traces of these Aristotelian conceptions still survive in popular terminology. We still speak of the sober, calculating individual as "cool-headed." And while we may realize that the heart's function begins and ends with circulatory processes, we still refer to it as the seat of desire and emotion. The individual moved by feelings of love and affection still declares what is in his heart. We still speak of "heartaches," of being "heartsick," and "heart-heavy." Though figurative in the main, we must allow that many of these expressions aptly describe many of the feelings and sensations actually arising from the region of the heart during strong emotion. And it is, no doubt, the extent of the heart's involvement during strong emotion that is responsible for our method of describing more intense feeling states.

To the modern frame of mind the above accounts must all appear rather fantastic. And yet, they are not entirely without foundation. They reflect an early recognition of the fact that our desires and our motives are of internal rather than external origin, and that man's major demands and sources of motivation must be attributed to the action of specific organs. But being without exact information concerning internal and organic conditions, and being without knowledge as to how these conditions prompt our behavior, it is natural enough that mystic conceptions and rather bizarre explanations should have arisen.

THE AUTONOMIC SYSTEM

There *is* an inner man, a physical inner man, to whom ultimately we must attribute the real power of direction and control. We refer to the autonomic system, or to that complex of nerves and nerves centers which is in immediate control of the heart, lungs, stomach, intestines, glands, and other organs concerned with bodily up-keep and general well-being. Because of their intricacy these nerve centers are usually referred to as plexuses, such as the cardiac, solar, and pelvic plexuses. Three systems of nerves—cranial, sympathetic, and sacral—which extend from the brain stem and spinal cord, provide connection between the central nervous system and these outlying centers.

The autonomic system may be considered the true inner man because activity is so largely concerned with satisfying its needs. Interest centers about its demands and about the gratification of the appetites which belong to it. For the most part we are concerned with the maintenance of organic equilibrium, and with the perpetuation of desired bodily states, all of which are intimately associated with the functions of the autonomic system.

On the physical side, at least, we may regard this system as man's Prime Mover. Feelings, emotions, impulses, desires, and appetites are all of its making. Our limbs and bodily structures, as well as the brain which controls them, are really its servants. For are they not the instruments through which the needs and interests determined by the autonomic system are achieved? Just what is the relation between the brain and the autonomic system? This: We show our intelligence, not in what we want (*that* is the function of the autonomic), but in the way we get it. The autonomic determines *what* we shall seek, the brain determines *how* we shall seek it. The brain is the "chauffeur" directing individual adjustments of the body and the limbs, but the autonomic is the "master" which determines the objectives toward which these adjustments are made.

PHYSICAL CHANGES IN EMOTION

The brain is involved in emotion, but is not the seat of emotion. This seat, as already observed, is in the autonomic system. The brain is involved to the extent that the physical and bodily changes belonging to an emotionally stirred-up state must be registered in order to become conscious.

An emotion is typically aroused in the presence of an exciting object or in the course of stirring events. The perception of the exciting object is responsible for the internal changes and stirred-up condition identified with the emotion. To maintain that an emotion is not a purely mental thing, but a state of strong feeling and keen sensory awareness resulting from organic and bodily changes, is to affirm the well-known James-Lange theory. The mind, James and Lange contended, is neither the *seat* of the emotions, nor is it the *origin* of the emotions. Undeniably, sensations and feelings belonging to the emotion may be considered mental, but these sensations and feelings are the *results* and not the cause of the bodily changes.

In other words, these men reversed the order of events as usually conceived. The stimulus object does not *first* arouse a state of fear, or of anger, and *then* the bodily and visceral changes. We do not, said James, meet a bear, get frightened, and run; but we see the bear, run, and *then* get frightened. That is to say, the perception of the bear as an object of danger leads to profound internal changes with a strong disposition to flee; and the feelings and sensations which *result* from these internal changes and bodily reactions *are* the emotions. In confirmation of this view James urged that

> . . . if we abstract from our consciousness of an emotion all the feelings of its bodily symptoms, we would have no mind-stuff left of which the emotion could be constituted. What kind of an emotion of fear would be left if the feeling neither of quickened heartbeat nor of shallow breathing, neither of trembling lips nor of weakened limbs, neither of gooseflesh nor of visceral stirrings, were present, I cannot imagine.

Even better evidence for this contention is found in the facts of psychopathology. Patients suffering from abnormalities and diseases of the autonomic system may be disposed to experience intense emotions of anger, fear, rage, or love, in the absence of the usual provocative stimulus from the environment. In other cases patients may become incapable of experiencing any emotion whatsoever. While intellectually as normal as ever, such patients may become emotionally indifferent to their surroundings, to their attendants, their friends, and even to their immediate family.

PLEASURE NERVES AND TENSION NERVES

In the absence of emotional stimulation the activity of the internal organs goes on at an even gait. Under these conditions their rhythmic action is controlled almost entirely by the outlying ganglia and nerve plexuses. Under excitement, on the other hand, these functions are variously modified by nerve discharges from the brain reaching the vital organs over three systems of nerves: cranial, sympathetic, and sacral. Such discharges effect changes in blood pressure, circulation, heartbeat, digestion, breathing, and glandular secretion.

Depending upon the form of emotional stimulation, discharges may occur over any or all of these nerves. But the effect of the discharge varies with the nerve over which it passes. The cranial and the sacral nerves, which are active in pleasant emotion, have one effect; the sympathetic nerves, which are active in unpleasant states, have another. For convenience sake, we shall call the former, the *pleasure nerves*, the latter, the *tension nerves*.

Practically all the internal organs receive nerve supply from both the pleasure and the tension nerves. But the effects of these nerves are in opposition: The pleasure nerves augment the digestive and the vegetative functions, and lower the threshold for sexual activity, while the tension nerves inhibit digestion and sexual activity, increase the heartbeat and respiration, and constrict the blood vessels. The pleasure nerves are active in the euphoric states of comfortable digestion and recuperative activity, the tension nerves in the unpleasant states of anger, fear, grief, and sorrow. Thus, the pleasure nerves are protective and preservative in their action, the tension nerves are disturbing and debilitating. The former are upbuilding and provide for energy surplus, the latter are weakening in that they result in unusual energy consumption.

PLEASURE, EUPHORIA, AND SEX

The pleasant emotions and the euphoric states associated with digestion and sex, with joy and exhilaration, with play and recreative functions, are due mainly to the action of the pleasure nerves. The unpleasant emotions of fear, anger, rage, pain, and depression are due to action over the tension nerves.

Obviously, any condition which produces action over the pleasure nerves is one to be courted, since such action tends to build up bodily tonus. On the same grounds, any condition producing action over the tension nerves should be avoided because of its debilitating effects. The disturbing effects of excitement before, after, or during a meal are known to all. The opposite effects may be expected from pleasing surroundings, from good music, flowers, and pleasant conversation, since these put the individual in a frame of mind conducive to the digestive and upbuilding functions. In effecting discharges over the pleasure nerves these conditions will tend to increase salivation and the internal secretion of digestive fluids.

Now the conditions which will facilitate digestion will also facilitate the sex functions. For even though the vegetative and sex functions are controlled by different nerves—the vegetative by the cranial pleasure nerves, the sexual by the sacral pleasure nerves—both are influenced by any or all forms of sensory stimulation which have pleasure value. Music, pleasing odors, and pleasant surroundings, are apt to be as facilitating to the sexual as to the assimilative functions. What is more, profuse action over one of these systems tends to produce action over the other. Thus, animals under strong sexual stimulation will show increased salivation. Likewise, during prolonged anticipation of being fed sexual manifestations may be produced. Stroking and other forms of cutaneous stimulation will have the same effect. These facts are strongly suggestive of the close relation existing between the action of the cranial and the sacral pleasure nerves.

WHY PEOPLE DIFFER EMOTIONALLY

People are as unlike emotionally as they are unlike physically. Not only so, but emotional differences are as permanent as are physical or structural differences. We are born quick-tempered or easy going, bold or timid, fiery or sullen, affectionate or cold, just as much as we are born with brown eyes or with red hair.

People differ emotionally because they differ in the ease with which impulses pass from the brain out over the pleasure nerves or the tension nerves to the internal organs causing the changes characteristic of emotional states and emotional disposition. The ease with which these discharges occur depends upon the amount of resistance within the synapses found along the path of discharge. For instance, if resistance to discharge over the tension nerves is low, the individual will be excitable, prone to anger, and to strong emotion. He is apt to be thin and emaciated, because of the depleting effects of these emotions. Ease of discharge over the tension nerves is chiefly a matter of synaptic resistance within the sympathetic ganglia through which these nerves communicate with the vital organs. Thus we might say that individual differences in excitability are due to differences in the resistance to discharge over the sympathetic ganglia.

On the other hand, take the individual who is easy going, who is of an even temperament, who laughs and grows fat. He is in general not the nervous type, nor is he inclined to be irritable. Resistance within the sympathetic ganglia being high, it requires intense and prolonged stimulation to excite or unsettle him. Ruffled feathers do not belong to the order of his experience. His good disposition is perhaps as much, if not more, a matter of easy discharge over the cranial pleasure nerves, as it is a matter of high resistance to discharge over the tension nerves. That the individual who is good natured, who is pleasant and mirthful, should also be inclined to be fat is to be expected, since his cheerful and easy-going disposition is the result of easy action over nerves which tend to facilitate the assimilative functions.

Then, again, there is the individual who is rather tender hearted, who is inclined to be loving and affectionate. Such an individual has a low threshold for action over the sacral pleasure nerves. This being the case his disposition toward tender feelings and emotions is apt to be associated with more than the usual amount of sexual irritability, for the reason that the sacral nerves innervate the glands and the organs belonging to the reproductive system, as well as those responsible for the tender emotions and the parental instincts.

It has long been known that the glands of internal secretion have much to do with emotional differences, and that excess or deficient secretion of particular glands produce corresponding variations in the emotions associated with them. But, inasmuch as these glands are subject to the influence and control of the pleasure nerves and the tension nerves, the action of these nerves must be considered primary in determining emotional differences.

That emotionality depends upon resistance to discharge over the nerves and nerve patterns involved in emotion is apparent from the effects of habit and experience. To have met with something very unpleasant or to have witnessed, let us say, a gruesome accident, frequently leaves the individual in a nervous and jumpy condition. Increased excitability may also result from recurrent or intense emotional stimulation. This is because repeated or intense action over particular paths of discharge lowers the threshold or lowers the resistance to further discharge. As a result, very slight stimuli produce the same effects as strong stimuli would normally. Ordinarily, there is no lowering of the threshold from such experiences. Removal from the effective surroundings and a chance to rest are usually sufficient to restore normalcy.

That an individual who has laughed once laughs more easily a second time, and that the second joke doesn't need to be as good as the first to get the same results, illustrates the same principle in connection with more pleasant emotional reactions.

MAN A CREATURE OF THE HEART RATHER THAN OF THE HEAD

In his emotional life man shows his kinship with other creatures much more than in his practical life. His behavior during fear, anger, and strong emotion is much more like that of other species than at any other time. Under the sway of emotion he ceases to be a creature of thought and reflection and becomes a creature of impulse and action.

There is a reason for this similarity between man and animals. It is to be found in the structural and the functional similarity in the portion of the nervous system upon which emotional disposition depends, namely, the *autonomic.* In more recent evolutionary stages there has been development, not of this system, but of the brain and the organs controlled by the brain. Accordingly, while showing increased efficiency in his outward and practical adjustments, man has remained primitive in his emotional life.

There is perhaps no better evidence of our relatedness to other species than the fact of this emotional similarity. So far as food and sex are concerned, and so far as the entire system of internal, vital, and reproductive functions are concerned, we are as much animals as ever. Evolution within this system has long since ceased. For this reason changes wrought within it during strong emotion are no longer adapted to existing conditions. In most cases they are merely the echoes of a distant past, of a life elemental, primitive, physical. That we do not understand the emotions, that we do not understand the things we do, or tend to do, when under their control, is simply because we are now far removed from the conditions under which they originated.

THE PURPOSE OF PHYSICAL CHANGES IN EMOTION

But however strange, however mysterious the changes and the impulses which control us, they are not without purpose, or, at least, *were* not without purpose in man's original environment. The strong impulse to action and to flight during fear once served to protect man against attack from his enemies. The impulse to strike and to fight during anger is obviously a survival of the original method of dealing with an intruder or an offender. But these impulses to action are perhaps less interesting than the internal and organic changes upon which they depend. These changes, precipitated by the realization of impending danger or of outside interference, are all preparatory to the form of activity likely to be engaged in. There is a quick release of energy and a rapid mobilization of all the bodily resources which serve the individual in danger and which prepare him for attack or for flight.

What is true of these emotions and of the changes attending them is just as true of the emotions associated with the appetites. Just as changes induced by fear and anger are preparatory to flight or attack, so, too, the internal changes and secretions produced by food or sex stimulation bring the organism into a state of readiness for the biological functions associated with them.

But while there may be no difficulty in comprehending the purpose of emotional responses when considered *in toto*, it may become something of a puzzle in the case of specific responses. For instance, what is the utility of the feeling of being rooted to the spot, sometimes experienced during intense fear? It has been suggested that this condition is a survival of the tendency to remain motionless when in danger, a tendency which still exists as the chief means of protection in the case of certain birds, rabbits, hedgehogs, and other very timid creatures.

Certain other responses are still farther removed from their original setting. In anger and contempt the lip curls and the teeth are bared. These responses seem so very natural that few ever reflect upon their biological significance. A suggestion as to what this might be is found in their obvious resemblance to the threatening snarl of an animal preparatory to attack. Social disdain is sometimes expressed by elevation of the head and contraction of the muscles about the nose and mouth. This reaction of haughty disdain may be a carry-over from the primitive reaction of aversion to malodorous and distasteful objects.

ERECTION OF THE HAIR, "GOOSE FLESH," AND "CREEPING FLESH"

Extreme fear induced by some terrifying or appalling spectacle results in changes of a very violent character. The individual is shaken to the very core. He gasps for breath, trembles, and momentarily seems to lose all bodily control. Pallor spreads over his face, his breathing becomes short and convulsive, his heart action violent and unsteady. For the time being he seems to be entirely at the mercy of his turbulent impulses.

In addition to these deep-seated and more disturbing symptoms there is a group of sensory phenomena associated with changes in the skin. Constriction of the minute blood vessels below the skin surface occasions the withdrawal of blood supply responsible for the pallor and coldness of the skin. The so-called "cold sweat" produced as soon as perspiration starts is another result of this withdrawal of blood from the surface of the body. It may be contrasted with the "warm sweat" experienced when the skin surfaces are flushed with blood as the result of excessive heat or vigorous exercise. The feeling of a "cold shiver running down the back" is due to the *combined* effect of the cold sweat and the gradualness with which nerve impulses are distributed to the sweat glands and hair cells.

But one of the most interesting changes in connection with the skin is the prickling sensation which, on such occasions, passes over the scalp and makes the individual feel as if his hair were standing on end. This feeling is not entirely illusory. Attached to the root of the hair, or to its obliquely inserted shaft, is a minute muscle. Under strong emotion this muscle contracts, causing the hair to rise slightly from its prone position. Hair being present over practically the entire body surface, sensations similar to those from the scalp may arise from other surfaces as well. The reason for the oblique position of the hair seems to be that it may function better as a conductor of moisture and as a protection against blows. The prolific growth of hair on the skull, and, in some animals, about the neck, may be regarded as such a protective measure. In the case of other species the erection of the hair, the bristling of fur, or the ruffling of feathers during excitement is much more pronounced. That extreme cold should be able to produce the same effect upon hair, fur, or feathers, seems again to be a protective measure.

Between the muscle which pulls the hair to an erect position, and the shaft of hair itself, lies a gland whose function it is to secrete the oil required to keep the hair smooth and flexible. In extreme cold, intense fear, anger, or disgust, the convulsive action of the hair muscle forces this gland against the skin surface so as to produce a slight elevation. This gives to the skin the appearance commonly known as "goose flesh." In the case of birds these regularly distributed elevations are much more pronounced, because of the size of the gland furnishing oil for the plumage.

The feeling of "creeping flesh," just as the feeling of a "cold shiver running down the back," must be attributed to the gradualness with which nerve impulses spread from the brain and the spinal cord to the muscles at the hair root.

WHY HANDS AND FEET PERSPIRE DURING EXCITEMENT

The cold or clammy feeling of the hands is one of the most familiar symptoms of nervousness. The coldness is due to the withdrawal of blood supply and to the cooling effects of perspiration. Secretions of the inner surface of the hands, on the soles of the feet, and in the armpits, occur very readily under excitement and appear to be among the first symptoms of action over the tension nerves.

What is the reason for this? What is the possible utility of moisture on these surfaces during strong emotion? Its serviceability can have nothing to do with body temperature, since the cooling effects of perspiration would be much greater on more exposed surfaces. If it is not this then it must have something to do with the organic changes which are preparatory to the kind of activity in which primitive man engaged when under emotional stimulation. It must in some way be preparatory to emergency situations involving struggle or attack. Every one knows that a moist surface gives the individual a better grip. The housewife uses a moist cloth to good advantage in unscrewing the lid of a jar, while the workman secures a firmer grip on his tool by salivary application. To our arboreal ancestors the slip of a hand or a foot sometimes meant certain death. This was the case when they swung from limb to limb in the act of fleeing from an enemy. During a struggle a certain amount of moisture would insure a firmer grip and a surer footing. Thus, the tendency to perspire on these surfaces gained a survival value. And, as in all such cases, the selective and survival value of the trait caused it to be perpetuated in the racial stock through the gradual elimination of those handicapped by its absence.

CHANGES IN DIGESTION AND CIRCULATION

X-rays show that under excitement there is an entire cessation of the churning movements of the stomach and a complete inhibition of the kneading motion of the intestines. At the same time there is inhibition of the secretory organs providing the digestive fluids. The entire digestive tract gains a pale, flaccid appearance as the result of withdrawal of the blood to other parts. The same stimulus which stops digestion increases the heartbeat and the blood pressure, and causes the redistribution of blood supply from the digestive organs to the heart, lungs, brain, and the larger muscles of the trunk and the limbs. All of these changes, it will be remembered, are effected through action over the tension nerves, while action over the pleasure nerves has reverse effects.

ARE WE STRONGER IN FEAR AND IN ANGER?

Our feeling of greater strength during fear and anger is not exactly an illusion. The tales of extraordinary feats and tireless application during periods of strong emotion are not pure fiction. In fact, as already observed, the *object* of the changes occurring under excitement is to increase strength and to prepare the individual for violent action. To this end the changes in circulation and digestion are important factors. Still more significant is the increased supply of fuel for the muscles (glycogen or blood sugar) contained in the blood stream. This increase is made available through rapid release of emergency supplies stored in the liver and the muscles. Ogygen being necessary to combustion, or to the process by which glycogen is converted into usable form, the action of the lungs is speeded up and the blood in circulation becomes loaded with oxygen.

The striking absence of any feeling of fatigue characteristic of excitement is due to the rapid removal of waste products, or *fatigue* products, as they are called. These would otherwise tend to be present in increased quantity, in so far as there is increased burning and combustion.

Very important as a factor in strength is the action of the *adrenals*, two small glands situated above the kidneys. Curiously enough, the substances produced by these are able to mimic most of the efforts normally produced by action over the tension nerves. They are themselves connected with these nerves, and, when stimulated, pour their secretions into the blood stream which rapidly circulates them through the body. The presence of these products in the blood causes heart action and respiration to increase, stops digestion, releases glycogen, and reduces the feeling of fatigue through more rapid elimination of fatigue toxins.

A SAFETY DEVICE

A remarkable property of the blood is its capacity for changing from a fluid to a jelly-like consistency whenever it comes in contact with an injured surface. This property, known as coagulation or clotting, prevents excessive loss of blood by sealing over the cut or injured surface.

A fact which is of special interest in this connection is the reduction in *time* required for coagulation during periods of excitement. Experimental studies have shown that this reduction is due to increased amounts of adrenalin in the blood stream. Such increase of adrenalin during intense fear, for example, is sufficient to reduce the time required for coagulation from about five minutes to one minute or less. The usefulness of this chemical change is obvious when we recall that, in the life of primitive man, excitement was typically aroused by impending danger or by some threatening object. Increased amounts of adrenalin in the blood stream, causing increased tendency to clot, greatly reduces the danger from bleeding in the event of a wound.

OTHER CHANGES IN EMOTION

Intense sexual excitement will cause the eyeball to glisten and the pupil to expand in a manner aptly described in the poetic expression "starry-eyed love." This is because rising emotion and excitement, even of the pleasurable kind, tend to increase action over the tension nerves, which, in their turn, provide for pupillary dilation. Reduction in the size of the pupil is effected through action over the cranial pleasure nerves. The purpose of pupillary enlargement is to admit more light to the eyeball. This would improve vision, and, biologically, would have the advantage of rendering the eyes more effective in the event of a struggle or under any condition which would produce fear or anger. The pupil contracts when the individual lapses into a quiescent state. This is a protective measure in that it shields the sensitive retina of the eye from excess stimulation.

The dryness of the mouth during fear and anger is due less to the absence of salivation than to the inhibition of the minute glands found in the mucous membranes of the mouth, nose, and throat.

Another interesting change caused by the same conditions is the widening of the bronchioles or air tubes leading to the lungs. During strong emotion, when more oxygen is needed, the muscles surrounding these tubes relax and allow freer passage for the air to the lungs and easier elimination of carbon dioxide. The widening of the bronchioles is realized through action over the tension nerves and through an increased supply of adrenalin in the blood. On the other hand, contraction of the muscles and narrowing of the tubes renders breathing more difficult. The labored breathing of the asthmatic patient is frequently due to this condition. The observation that a fit of anger or of sudden fright will temporarily relieve an asthmatic attack has led to the use of adrenalin in emergency situations, since adrenalin in the blood stream is responsible for the relaxation effected by excitement. The only difficulty with this method of treatment is that relief through injection of adrenalin cannot be achieved without all the attendant effects of adrenal secretion, such as increased heartbeat, increased respiration and blood pressure, as well as complete cessation of activity within the digestive system.

CHAPTER VI

WHY DO WE WEEP?

Tears, idle tears, I know not what they mean,
  Tears from the depth of some divine despair
Rise to the heart and gather to the eyes
  In gazing on the happy autumn fields,
In thinking of the days that are no more.
—TENNYSON, "*The Princess*."

TENNYSON was puzzled when he wrote these lines, just as any one trying to determine the cause of tears must be puzzled. Offhand, the problem appears simple. We should probably say that we weep because we are sad or depressed, because we are sorry, or because we are in despair. And yet, do we not also weep for joy? Do we not sometimes weep when we really should be happy—when meeting a long lost friend, or upon achieving a much desired objective? Are we not inclined to weep at weddings as well as at funerals? Indeed, so diverse are the situations which call forth tears, that it would seem futile to look for any single cause. They well up in us on the most unexpected occasions. Not merely in despair do they appear, as Tennyson reminds us, but in contemplation of a happy scene or a well-earned victory, in viewing a beautiful picture, a wedding procession or a triumphal march. Sometimes it is the mellow strains of beautiful music that so affect us; sometimes a familiar yet strangely reminiscent scene; sometimes the happy thought of things to come, or, again, the thought of those that are no more.

Until very recently scientists have given very little attention to weeping. This seems strange in view of the elaborate discussions on laughter and related topics. How shall we account for this neglect? The tendency to avoid the unpleasant may have been a factor. That weeping is a private affair, a none too worthy occupation, and one of which the average individual feels ashamed, may also have had something to do with its neglect. That is to say, being unworthy as a reaction, weeping may have seemed unworthy as a subject for investigation. Moreover, there may have been a feeling that weeping is too intimate a reaction, too near the soul life of the individual, to be subjected to critical analysis and inspection. Equally significant may have been the tendency to take the cause of tears for granted, and to assume that they are, of course, produced by sorrow and depression.

But none of these circumstances is as important in the neglect of weeping as the fact that it does not lend itself very readily to experimentation. To make the individual weep at will would be very difficult to say the least. Furthermore, the "tender spot" and the stimuli which affect it vary from individual to individual. And, in this case, recourse to animals as subjects for experimentation is quite out of the question, since the reaction is distinctly human. Most animals, it is true, do possess lacrimal glands, but, so far as is known, these glands cannot be made to secrete as a result of emotional stimulation, their function being solely that of providing lubrication for the eyeball. Darwin's contention that elephants and certain other species shed tears during strong emotion has remained unconfirmed.

EXPERIMENTS ON WEEPING

At present, only two methods of approach to the subject of lacrimation seem possible. One is to make systematic observations upon the conditions associated with weeping, noting the type of stimuli which are particularly effective in producing the discharge. The other is to determine the pathological conditions under which weeping is profuse, and again to notice the special conditions which are distinguished by the absence of tears. The first of these methods may be called *psychological*, the other *pathological*. Both were followed by the writer in a study published in *The Journal of General Psychology*, July, 1929. With the aid of several assistants observational studies were made at theaters, funerals, weddings, and on other occasions which proved favorable for weeping. The most fruitful and convincing results, however, were obtained from pathological studies made at the Danville State Hospital of Pennsylvania.

DEFINITION OF WEEPING

Crying and weeping, as descriptive terms, are frequently used interchangeably. Both are used to describe the typical emotional reactions associated with tears. But while weeping always implies this emotional state with its attendant glandular discharge, crying may also refer to any excited, plaintive, or clamorous outburst, quite apart from tears. In other words, weeping is the more exact term, since it is much less ambiguous.

A distinction should be made between the shedding of tears in emotional situations and their occurrence as reflex discharges under chemical and mechanical stimulation. Thus, our eyes frequently "water" when peeling an onion, or they may "fill" when irritated by some foreign substance. Such lacrimation can hardly be called weeping. The following are some of the most familiar non-emotional stimuli for tears:

1. Irritation of the eyeball and lids through contact with foreign objects.
2. Irritation of the mucous membrane of the nose through inhalation of strong vapors or through some form of mechanical stimulation.
3. Violent laughter, coughing, retching, sneezing, and yawning.
4. Stimulation of the retina with infra-red or ultra-violet rays.

To these might be added a group of semi-emotional conditions capable of inducing tear secretion. Of such conditions increased tension under pain is perhaps the most familiar. The effectiveness of a stinging switch on the face or a blow on the nose is also well known.

THE CAUSE OF WEEPING

In the preceding chapter we noticed that practically all internal organs involved in emotional responses receive nerve supply from both the tension nerves and the pleasure nerves, the one system of nerves being *facilitating* to a given organ, and the other being *inhibitory* or restraining. Thus, heart action is speeded up by the tension nerves and inhibited by the pleasure nerves, while action of the stomach is restricted by the tension nerves and facilitated by the pleasure nerves.

The question now arises, What is the relation of these nerves to the tear glands? Are the tension nerves facilitating and the pleasure nerves inhibitory, or is the reverse the case? Is innervation from the seventh cranial (the pleasure nerve connected with the tear glands) the cause of tears, or is the tension nerve supply from the superior cervical ganglion responsible for the secretion? A correct answer to these questions would go a long way toward solving the problem of weeping. But on this point textbooks on physiology are silent; for the simple reason that little or nothing has been known. We believe, however, and the pathological and observational data we are about to report indicate, that the pleasure nerve supply—strange as it may seem—is facilitating, while the tension nerve supply is, if anything, inhibitory.

The crux of the whole question would seem to be this, that a given nerve supply to a given organ must *always* have the same effect, either that of facilitation or that of inhibition. This being the case, would it be possible for the tear glands to secrete under diametrically opposed conditions? Could they, as ordinarily supposed, be made to secrete both from "pure joy" and from "pure sorrow"? If they could, then the pleasure nerves must at one time have one effect and at another another. Similarly, there could be no constancy in the effect of the tension nerves. But this is contrary to all that is known about nerve supply and innervation. If innervation from the pleasure nerves is facilitating on one occasion, it must be on all occasions. And what is true of the pleasure nerves is just as true of the tension nerves.

Accordingly, we shall have to find some common element in the diverse and seemingly contradictory situations in which we weep. This element, as we hope to show, is a pleasure element, and the nerve supply which occasions the release comes over the pleasure nerves. However, both systems would seem to be involved to this extent; that action over the pleasure nerves is effective only when it *follows* or *attends* action over the tension nerves. Typically, it is the introduction of a pleasure stimulus or an alleviating stimulus following a period of tension that occasions the discharge. But as to the correctness of these statements we shall leave the reader to judge following our discussion, and after noting our illustrative material.

SYMPATHY, SELF-PITY, AND THE FEELING OF "POOR ME"

Perhaps nothing is more effective in creating a disposition to weep than the feeling of "poor me." There is comfort, solace, and restitution in tears. And so it happens that when some form of satisfaction or consolation is introduced following a period of anger or tension the individual may find relief in free lacrimal discharge. A good observer once remarked that

> . . . if you don't want a woman to cry when she brings to you her tale of woe, then pass the matter off as though it were a trifle. On the other hand, if you are tender and kind, if you satisfy her demand for sympathy, then you must be prepared for tears. The consoling arm placed about her, the words of regret and endearment, are, on such occasions, all too effective.

Darwin, another good observer, maintained that the best way to *check* the "occasional weeping of ladies who 'wish to desist' is to beg them earnestly *not* to try to stop, and to assure them that nothing will relieve them more than prolonged and copious crying." In other words it is not conducive to this form of "self-indulgence" to be required to look upon the act as a therapeutic measure, for, in so doing, you remove the desired element of sympathy and self-pity.

The writer, while working on this subject, happened to observe two boys playing in the street. In the course of the game one slipped and fell, and in so doing scratched and bruised his knee. The injury being slight he soon returned to his game. On seeing his mother, however, he ran to her, showed her the sore place, and began to weep profusely.

How shall we explain these situations physiologically? It would seem that in each case there is present some cause for tension or depression. In itself this condition appears ineffective. The lacrimal discharge occurs only as some agreeable or satisfying element is introduced. In other words, it is action over the pleasure nerves followed or attended by action over the tension nerves which occasions the release. As long as the boy merely has pain to contend with he does not give way to tears. It is the thought of his mother and the sympathy offered by her that proves too much for him.

WEEPING A SOCIAL REACTION

Weeping is essentially a social reaction, the social situation being either present or implied. If the individual weeps when alone, the social situation is implied.

In this case the feeling of "poor me" is *projected*, so to speak, in that the individual's lacrimosity is induced by the thought of what "right-minded" people would feel, or ought to feel, if they were aware of his or her plight.

Adults and children alike weep most easily when they feel abused or when circumstances favor the self-pitying attitude. One of the patients, in whom the writer was especially interested while making his observations at the Danville institution for nervous and mental diseases, showed this self-pitying attitude to a marked degree. For the most part this patient, a woman of middle age, was preoccupied with the mistreatment to which she believed herself subjected at the hospital. Even a slight amount of interest in her assumed affliction was usually sufficient to bring her to tears.

The inclination to view one's self as a martyr, very apparent in this patient, and the tendency to weep when the attitude meets with approval or support, is not at all uncommon even among normal individuals. The pleasure element which under these conditions produces the lacrimal flow would seem to arise from the satisfaction experienced by the individual in viewing himself as a suffering hero or an object worthy of sympathy.

We condone weeping in the child but disparage it in the adult. We excuse it in a woman but find it unbecoming in a man. Why these differences? Why, indeed, should weeping under any conditions be lacking in the social sanction enjoyed by other emotional responses? What is there about the reaction that makes the adult, when venting it, feel ashamed, and the child as it grows older feel the need of restriction?

The reason for this lack of social sanction is not obvious. But may it not be that the very lack of social approval and the very disparagement of weeping is itself an implicit recognition that it represents an appeal for sympathy, and that it is, in fact, a form of self-indulgence, an expression of weakness and dependence which is considered unworthy of the adult? If so, it is only natural that we should tend to excuse it more in women than in men, women being the weaker and more dependent sex.

THE POWER OF TEARS

Just as virility, strength, and independence have been accepted as distinctly masculine traits, so weakness and dependence have become associated with more obviously feminine traits. In its turn, weeping, like other traits expressive of weakness and dependence, has also gained this distinctly feminine halo.

We may find in these facts an explanation for the unusual persuasive value of a woman's tears; that is, in the presence of a man. It would seem that man yields to them because he finds an inner and perhaps quite unrecognized satisfaction in their implicit appeal. They emphasize a sex difference, and, by contrast, make him feel all the more conscious of his own self-reliance and masculine virtue. This appeals to his ego in that it enables him to glory the more in his own strength while indulging the weakness of another.

The fact that tears have this persuasive quality and are able to function as implicit appeals for sympathy, give to them a certain utility in social relations and may, moreover, account for their appearance and survival as a racial trait: They provide aid and protection for the helpless, whether these be the weaker and more dependent adults or infants who are in special need of social administration. With the appeal for sympathy inherent in crying and weeping, the infant, already a powerful stimulus to maternal affection, becomes all but irresistible.

THE WEEPING OF INFANTS

During the first few weeks the infant does not weep. It cries, but there are no tears and no internal or emotional upheavals comparable to those experienced by the adult while weeping. The crying of the new-born infant is purely reflex in character, and serves merely as an outlet for energy accumulating in the nerve centers under given forms of stimulation.

The deeper emotional involvement of the reaction in later infancy becomes apparent in the secretion of tears and in the tendency to sob, a reaction induced by the spasmodic contractions of the respiratory muscles. In addition to the tears and the sobbing there is also a slight change in facial expression. The more decided contraction of the depressor muscles draws down the corners of the mouth, causing it to assume a squarish outline, and giving to the face the pitiful expression associated with tears. These contractions are all involuntary and are not subject to conscious control. This absence of voluntary control is responsible for the quivering of the lips and the drooping of the mouth which are among the first signs of an approaching crying spell which the individual is trying to suppress.

The age at which tears first appear is a disputed question. It has been placed as low as 10 days and as high as

130. The fact that the maturation process varies with the infant, and the fact that observers differ in their interpretation of the reaction, may very well account for this difference of opinion. The writer's own observations would indicate that the age usually given is too young, and that unmistakable secretions resulting from an emotional upset do not appear, for the most part, until the second month.

In the infant, as in the adult, weeping is primarily a social reaction brought on by some form of social stimulation. The social implications of weeping are apparent in the results of an experiment performed by the writer on a twelve-months-old baby just learning to walk. The baby was placed in a crib in which it could stand supported by a horizontal bar placed at a convenient height. In the experiment the bar was occasionally so adjusted that a slight jerk would release it, with the result that the baby would fall. The effects of this unexpected fall varied with the presence or absence of the mother. If the mother were present, and particularly if she would come over and show a little sympathy, the baby was very apt to weep. If the incident went unnoticed the child might look a little startled and might even show a slight tendency to weep but nothing more.

The feeling of "poor me" and the demand for sympathy are even more prominent features of weeping in the child than in the adult. It is doubtful whether the child ever *weeps* without an element of self-pity. It cries, of course, cries to get its way, or even to be disagreeable when those in attendance refuse to humour it. In fact the spoiled child cries more than it weeps, crying being its chief means of controlling its social environment. When crying from pain or injury leads to weeping, it is probably because the disagreeable sensations finally arouse the feeling of "poor me."

CRYING IN ANGER

The angry cry of the child is rarely accompanied by tears unless such crying is prolonged. Darwin tells us of the case of a nine-months-old child who frequently indulged in such spells without any evidence of tears. Tears became profuse, however, "when it was punished by having its chair turned with its back to the table." This situation made it feel very much hurt, and must have moved it to feelings of self-pity.

It is doubtful whether anger, as such, can arouse tears. The individual may cry in rage, but he does not become lacrimose unless he becomes convinced of abusive treatment. When tears appear during anger it is either for the reason just mentioned or else it is the satisfaction and relief which comes from striking (particularly when the blows are effective), such satisfaction being instrumental in starting action over the pleasure nerves. Satisfaction following tension affords one of the most favorable combinations for the release of tears.

WEEPING AND LAUGHTER

Alternate or even simultaneous weeping and laughter are not at all unusual. When they occur simultaneously the tear secretion is not apt to be a true case of weeping, since it is typically produced by muscular strains around the eyeball owing to convulsive fits of laughter. On the other hand, it seems that certain emotional conditions find an equally good outlet in weeping as in laughter. This is particularly true in the pathological conditions associated with the exalted and expansive states of mania, paresis, multiple sclerosis, pseudo-bulbar palsy, and hebephrenia.

That weeping and laughter should be closely related is altogether in accord with our general theory, since both are supposed to contain a pleasure element. Just as alleviation following tension is a frequent occasion for weeping, so, too, laughter typically results when a period of tension or expectation is broken by the introduction of some more pleasing or unusual circumstance. In the situation in which we weep the emotional involvement is more profound, and the stimulus combination (satisfaction or alleviation following tension) is much more intense.

The following is a good illustration of the mixed emotional state which seemed to lead with equal ease into these two forms of emotional expression: A girl went into a very low closet to secure some needed article. She had barely entered before the door, which could be opened only from the outside, blew shut. For two hours she was obliged to remain crouched in the cold and uncomfortable enclosure. Chagrin, self-pity, amusement, and vexation produced a condition of alternate laughing and weeping when she was finally released.

Adults are sometimes surprised at the ease with which weeping may be turned to laughter in the case of children if a sudden or amusing stimulus is introduced just as they are beginning to cry. Where such reversals occur it would seem that either reaction serves equally well to expend the accumulating nerve energy.

RELIEF FOLLOWING TENSION

This, we have said, is the one of the most frequent occasions for tears. We shall note a few typical examples:

A mother, who had rarely been known to weep, broke into tears when her daughter, who had been missing for several hours and who was believed to have been hurt in a fall from a pony, was brought home safe and sound.

A man who had been worrying about his mental condition, and who for some time had been possessed of the idea that he was "losing his mind," called at the Danville hospital for an examination. It was interesting to note the glow of satisfaction and relief which spread over his face, when, following the examination, he was assured that his worries were without foundation. As he left the hospital the tears were streaming from his eyes.

In a recent boxing match a contender for the heavyweight championship shed tears as he returned to his corner in the ring, after delivering the blow which decided the bout.

To these might be added other illustrations of individuals moved to tears with the realization of some high honor, or with the attainment of some desired objective. Soldiers distinguished for bravery in action have been known to weep when public honor was being conferred upon them.

We feel better for a good cry. Why? Because relief from hyperactivity over the tension nerves has been achieved through action over the pleasure nerves. The restoration of the upbuilding functions through renewed action over these nerves has a pronounced tonic effect on the entire system. Moreover, the body has been cleared of much of the energy accumulating during the period of tension. This is accomplished through the convulsive reactions of the respiratory system as well as other reactions accompanying weeping.

To relieve the body of its pent-up state and to provide an outlet for the energy surplus is very much better than to leave this energy to smoulder in the system. The clarifying and beneficent effects of weeping are likened by Backmann to the effects of a rain after a thunder storm: "Ein stummer Schmertz wirkt beängstigend wie ein Gewitter ohne Regen. Was für die Entspannung der elektrichen Dämpfe des Gewitter der Regen bedeutet, das bedeuten die Tränen für den Organismus."

WEEPING UNDER LOSS AND PRIVATION

Sudden loss or bereavement is one of the most powerful stimuli to internal and emotional upheavals. The intensity of the internal changes is a direct result of excess amounts of energy released by the unusual stimulus. In the absence of an adequate outlet for this abundant supply the individual placed under the conditions of loss or bereavement is subject to a variety of symptoms. He may become hysterical, he may cry aloud, weep, he may be seized with a convulsive fit, or he may grow pale, tremble, and lose all bodily control.

The individual suffering loss may or may not weep, depending upon the circumstances immediately confronting him. Rarely does he weep if the situation calls for immediate action. A physician, while tending to his regular round of duties in a hospital ward, was suddenly and unexpectedly confronted with the mangled body of his ten-year-old son who had met with an accident in the street. Did the father weep? No! At least, not then. He hurried the boy to the operating room where efforts were made to save his life. Death came a few hours later. Not until the boy's mother that night related a touching incident from his behavior earlier in the day did the physician find relief in tears.

It is a fact of first importance that in cases of unmixed sorrow and extreme grief the individual is quite unable to weep. Growing tension and increasing nervousness may be the only symptoms of his suffering. He may be unable to eat or to sleep, all of which indicates excess action over the tension nerves. Any physician knows what a good cry can do for a patient in this condition. Tears bring relief because they are themselves the outward expressions of renewed action over the cranial pleasure nerves. With the period of tension broken and with the digestive and upbuilding functions restored, the patient is again able to rest, to eat, and to sleep.

A woman whose husband had been killed in an accident was unable to weep for several days. Her pallor, tension, and extreme nervousness were the only apparent signs of emotion. She wept for the first time when an old friend brought to the home a beautiful wreath of roses.

Observational studies made at funerals have been equally convincing as to the value of a pleasure stimulus and the extent to which weeping on such occasions is induced by a mixed emotional state. Reference by the minister to some admirable trait in the deceased or to some heroic incident in his life is likely to have marked emotional effects with increased lacrimation. Music, and the singing of familiar hymns have the same effect. Particularly is this true when the hymn is written in a minor key.

Even in connection with privation and loss, then, a pleasure element or a redeeming feature introduced in the midst of generally depressing circumstances serves to release the lacrimal flow. Tennyson seems to have been aware of this when he wrote the following lines in the "Princess":

> Home they brought the warrior dead;
> She nor swooned nor uttered cry.
> All her maidens, watching, said,
> "She must weep or she will die."

The next stanzas record the unavailing devices of the attendants to make the princess weep. Success is achieved when an old nurse, superior in her knowledge of human nature, introduces into the life of the princess a new ray of hope:

> Rose a nurse of ninety years,
> Set *his* child upon her knee—
> Like summer tempest came her tears—
> "Sweet my child, I live for thee."

TEARS OF JOY

According to the popular view "weeping from sorrow" is the rule, "weeping from joy" the exception. According to present analysis neither is the rule nor the exception, since we weep, not from pure sorrow, nor from pure joy, but typically as the result of mixed emotional states in which both tension and pleasure elements are present. Just as unmitigated sorrow does not bring tears, neither does the mirthful happy state. When we "cry for joy" it is usually a case of "relief from tension," or a state of mixed feelings not unlike the cases considered above. We shall consider one or two examples:

During the World War a woman passed through a French army hospital looking for her nephew whom she knew to have been wounded in action. When she found him, she gathered him in a very tender embrace. This happy (or unhappy) meeting drew the tears not only of the two immediately concerned, but of almost every soldier in the ward.

Crile calls attention to "an extraordinary tendency to laugh and to cry when in love," and cites the case of a young woman who cried profusely when a man whom she loved finally proposed to her.

Cases of weeping upon reunion after long separation are familiar to all.

It is not when we are supremely happy or elated that we weep, but when more serious elements enter into the picture, as at weddings and other festive or commemorative events. When the mother of the bride weeps it is because her happiness over the occasion is mixed with the more serious thoughts of having to lose her daughter. The music, flowers, and other æsthetic elements associated with the wedding are also conducive to this emotional state.

According to Dearborn, lacrimal secretion under the emotion of joy is only an aspect of general activity in which "the whole glandular system is stimulated, causing the secretions—gastric, salivary, lacrimal, sudoral, mammary, genital, etc."[1] It is a significant fact that increased action of all the glands mentioned is effected through action over the cranial and the sacral pleasure nerves.

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[1] Dearborn, G. V. N., "The Emotion of Joy," p. 63, Columbia University Press, 1900.

THE DRAMATIC

A well-known psychologist cited the following incident as typical of situations in which he had experienced the strongest disposition to weep. Coming down a street in New York he had been much incensed at seeing a boy being bullied and knocked around by a larger boy. Suddenly the smaller boy picked up courage and fought, succeeding after several well-directed blows in driving off his assailant. It was with this unexpected but much desired turn of events that the psychologist was under the impulse to weep.

This situation contains in simplest possible form all the elements which go to make up drama. It contains a hero who, at the outset, is placed under adverse circumstances, but with whom the interests and desires of the audience become identified. A climax is reached in which the hero comes into his own, gloriously overcoming the almost insuperable obstacles which have stood in the way of success. Through the thwarting circumstances leading up to the climax the desires and motivations of the audience have been sharpened, and, accordingly, are realized with so much greater satisfaction with the resolution of the scene or the play.

It is when the climax is reached and when the satisfying resolution is introduced that the disposition to weep is greatest. This, at least, seems to be the only possible interpretation of the results obtained from some observational studies made at a group of New York theaters presenting plays of high dramatic quality and noted for their effectiveness in drawing the tears of the audience. It was typically with the closing, triumphant, and melodramatic scenes that the handkerchiefs made their appearance and that occasional sniffling might be heard.

These, again, were the only conclusions which could be drawn from an experimental study on the effects of certain reading selections in which subjects participating were asked to indicate the lines which were most effective in arousing the lacrimal tendency. The reading selection which yielded most consistent results was one describing Lindbergh's transatlantic flight. The lines most frequently referred to by the subjects were those describing the successful arrival in France, with "Paris rising in her emotional might to acclaim the young hero"; and, again, those featuring the departure of "a lone silhouetted figure winging its way over those vast waters and disappearing in the gray dawn shrouding the Atlantic." The actual events themselves were, as we all recall, of the most dramatic. They contained all the elements of narrative technique effective in stirring the emotions: (1) the theatrical stage setting, colored and intensified through the failure of others; (2) the restraint, so necessary to a good story, introduced through adverse weather conditions which for days prevented a take off; (3) the suspense following the departure, kept at a maximum through the continuous posting of news bulletins.

MEETING AND PARTING

The well-known line from Shakespeare's famous balcony scene in "Romeo and Juliet"—"Parting is such sweet sorrow"—well expresses a situation which not only makes for drama but which is very apt to bring tears. Such parting is sweet because of the exciting thought of meeting again, and because of the dramatic touch lent to it by the realization that two fond hearts will cherish the memory of each other during the period of absence. This, in truth, is drama; drama which, happily enough, enters into the life of most people. We may weep on such occasion. But, do we care? The experience is one we would not want to miss for anything in the world.

Doubtless there is an element of drama in every situation that calls forth tears. It is the presence of this element of drama which disposes us to weep as much when meeting long absent friends as when parting with them—which stirs us with like emotions at weddings as at funerals.

THE ÆSTHETIC

It is doubtful whether any of us can experience any great depth of feeling, any very profound emotion, except as he is confronted with the ideal—the highly desired—and *yet*, the unattainable. When we lose ourselves in the beauties of music and of art we are conscious of something more than the ideal and the desired. With the experience there is a note of sadness, a consciousness of something akin to pain. Ruskin, in fact, maintained that *there is no true beauty without a touch of sadness*. In the lines quoted from Tennyson at the beginning of this chapter there is a recognition of somewhat the same idea:

> Tears, idle tears, I know not what they mean,
>   Tears from the depth of some divine despair
> Rise to the heart and gather to the eyes

> In gazing on the happy autumn fields,
> In thinking of the days that are no more.

When a situation with dominant æsthetic features moves us to tears it is usually because it appeals to the tender emotions. This is the case when we weep at weddings, commencements, reunions, funerals, etc. With the mingled feeling state created on such occasions tears spring involuntarily to the eyes.

The stirring qualities of music must also be attributed to its capacity to move us with these varied emotions. That the minor scale should be more effective than the major in producing tears, is because in the minor scale we have the desired combined with the undesired—æsthetic strains combined with tonal elements falling short of complete consonance—and thus arousing the unrest and mingled feeling state coupled with a desire for the completeness of the major chord.

EXCESS WEEPING OF MENTAL PATIENTS

With the aid of Superintendent J. A. Jackson and Clinical Director H. V. Pike of the Danville State Hospital of Pennsylvania, a survey was made of the pathological conditions associated with excess weeping. Attention was also given to the pathological conditions distinguished by the entire absence of tears.

If the popular conception is correct, namely, that sorrow and depression are the normal and natural causes of tears, then we should expect to find patients suffering from unadulterated depression exceedingly lacrimose. Yet, among the depressed cases brought under observation, not a single patient was found who showed this disposition, or who could be made to weep while in the midst of a depressive psychosis. Within the manic-depressive group the only instances of tears appeared during the transition from a depressed to an exalted state.

One case of agitated depression (a woman of about forty) diagnosed as "manic-depressed-depressed" was of special interest to the writer, and was among the first to be brought under observation because she had been reported as "constantly crying." That excess action over the tension nerves when occurring alone is not conducive to tears is in evidence in her case, since all the symptoms in her case were of hyperaction within this sphere. The following is a brief account of her behavior on one occasion:

> As she entered the room she appeared in extreme distress, gasping for breath and complaining "My side, my heart, and my head are hurting terribly"—places her hands successively on the ailing parts. When asked why she should be suffering so when apparently nothing could be done to relieve her, she answered,
>
> "To tell the truth doctor, I think it is my soul. I used to have faith, but now I think I have done something wrong. I don't have faith, but I have prayed and I don't get relief. Oh can't you do something for me!"—wrings her hands as in despair.
>
> Her short breathing, her drawn facial expression, her moaning and complaining, might best be described as "crying." Yet there were no tears and upon investigation it was found that, though reported by the nurses as "constantly crying," no one had seen her shed tears. During the interview all attempts to bring her to tears failed. Consolation, sympathy, harsh treatment, were all equally ineffective. In a way this was to be expected on the assumption that the cranial pleasure nerve supply is necessary to the lacrimal discharge, since all her symptoms were of excess sympathetic (tension nerves) action. Accordingly, stimuli directed toward cranial action were of no avail. The sympathetic discharges which doubtless were responsible for her fears, hypochondrias, and arterial hypertension, functioned inhibitorily to cranial action.

PLEASANT, EUPHORIC, AND EXPANSIVE STATES MOST CONDUCIVE TO TEARS

The pathological condition most favorable to tears is not one of depression, nor of exaltation or excitement, but of mild euphoria and a somewhat mixed emotional state, such as occur not infrequently in paresis, multiple sclerosis, and arteriosclerosis. Our most facile subjects belonged to these groups. One or two of these may be described briefly:

K. R., a female patient, seemed pleased to be brought into consultation, smiled, and immediately became communicative. She appeared in good health and was rapidly gaining weight. The first questions regarding time of commitment and length of stay in the hospital were answered correctly and without show of emotion. When being questioned, however, as to the circumstances of her commitment she cried profusely as she exclaimed,

"I was sick but had to work like a horse." (Self-pity.)

Redirecting her attention by talking about the wards and the nurses, it seemed not very difficult to calm her. In fact, it was easy enough to make her laugh. She said she felt fine, but wanted us to write to her husband so he'd come and get her. When speaking about how good he had been to her, and what a "big-hearted man" he was, she again wept (tender emotion). With a turn in the conversation bringing up a point on religion, she spoke up with some defiance and satisfaction, declaring that whereas her husband was Catholic she was Protestant, and had brought up her children Protestant just as she had told him she would. Seeming again to feel more friendly disposed toward him she wept once more as she said,

"But he was always good to me, and I want to see him."

The interesting thing about this case was the ease with which she could be made to weep, and, again, to laugh. On our second visit she cried again as she said she was sure her babies were missing her.

M. P., a senile patient with arteriosclerosis, while less coherent than K. R., presented in all other respects a similar picture with ease of lacrimation, particularly when the matter of going home was brought up for consideration.

B. S., diagnosed "psychopathic personality," displayed an emotional state not unlike that of K. R., but on the whole was much more agreeable to deal with. There was evidence of a Parkinsonian disorder. Emotional instability associated with this condition is a well-known phenomenon. The patient seemed in good spirits and gave relevant answers to all questions. The nurse reported that she cried easily when her mother came to see her or when she did not hear from home. At the close of the interview when the examiner asked her if she would like to go home she began to weep as she said

"I've sure been here long enough." (Sympathy and self-pity.)

Jelliffe and White in describing the changeability in mood and emotionality of the expansive paretic refer to the frequency with which weeping may occur in the midst of ecstasy and sublime happiness.[1] The same authors refer to "involuntary laughing and weeping" with euphoria, and facile interchange of exaltation and depression, in the case of multiple sclerosis. "Lack of emotional control with alternate weeping and laughing" is also referred to by Rosanoff.[2] A somewhat similar condition, according to Buckley, obtains occasionally in hebephrenia: "Protracted crying spells for which the patient can give no account are not uncommon; likewise causeless laughter is induced by stimuli which in the normal would be inadequate."[3]

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[1] JELLIFFE and WHITE, "Diseases of the Nervous System," p. 796, Lea and Febiger, 1923.

[2] ROSANOFF, A. J., "Manual of Psychiatry," p. 629, John Wiley & Sons, Inc., 1905.

[3] BUCKLEY, A. C., "The Basis of Psychiatry," p. 311, J. B. Lippincott Company, 1920.

It is a matter of note that in all the afore-mentioned examples the lacrimose condition is associated with euphoria. The same may be said of the affective states in pseudo-bulbar palsy regarding which Cannon reports "uncontrollable and prolonged fits of crying and laughing.[1] Tilney and Morrison who made a special study of 173 cases of pseudo-bulbar palsy report alternate crying and laughing in 17 per cent of the cases; crying alone in 16 per cent; and laughing alone in 15 per cent.[2]

HYPERTHYROIDISM AND EXCESS WEEPING OF ADOLESCENT GIRLS

Increased thyroid secretion producing restlessness and excitability may also effect a low threshold for tears, according to Rosanoff, Crile, and Cannon. This is particularly noticeable in adolescent girls. Increased thyroid action during the period of adolescence not only produces increased sexual irritability, but lowers the threshold for all emotional stimuli. In Graves' disease there is hypersecretion of both the adrenal and the thyroid. In this case, adrenal action may account for the patient's susceptibility to anger, while increased thyroid action may account for the unusual display of tender emotions and the ease with which the patient may be moved to tears, since thyroid action tends to increase action over the cranial and the sacral pleasure nerves. The influence of hyperthyroidism upon the cranial nerves and the lacrimal glands tends to substantiate the position that lacrimal secretion, in the last instance, is bound up with action over the cranial nerves.

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[1] Cannon, W. B., "The James-Lange Theory of Emotions," p. 117, *Washburn Commemorative Volume*, 1927.

[2] Tilney and Morrison, "Pseudo-bulbar Palsy Clinically and Pathologically Considered," *Jour. Mental and Nervous Diseases*, Vol. 39, p. 505, 1912.

PATHOLOGY OF THE NERVES CONNECTED WITH THE TEAR GLANDS

But the most conclusive evidence from pathological sources that the pleasure (cranial) and not the tension (sympathetic) nerve supply is responsible for lacrimal discharge, and that tears, therefore, are aroused by some pleasant or at least some alleviating form of stimulation, is to be found in the effects of injury to these two sources of nerve supply. Jelliffe and White report that paralysis of the cervical sympathetic nerves (tension nerve supply) cause an increase in tears.[1] This would indicate that their action has an inhibitory rather than a facilitating effect. On the other hand, they find that paralysis of the facial nerve (the pleasure nerve supply to the tear glands) causes a suppression of tears, which would make their normal action facilitating. If the paralysis of this nerve is merely peripheral, then the increased action of the deeper lying fibers causes increased lacrimal discharge.[2] That such increase is likely to be associated with euphoric conditions is again seen from the fact that vagotonic reactions (Vagus nerve is a pleasure nerve) which themselves tend to produce euphoria through their nutritive and upbuilding effects, also lower the threshold for tears.

SUMMARY

Tears, when affectively produced, are indicative of a mixed emotional state. Neither sorrow, dejection, joy, nor elation, when occurring in pure form, is very effective, if at all, in producing the discharge. Typically, it appears when a depressing or otherwise unpleasant situation gains a redeeming feature, or when a period of tension with unpleasant stimulation is followed by pleasant or alleviating stimulation. This accords with the apparent implications of our physiological data that the pleasure nerve supply (seventh cranial) to the tear glands is facilitating, while the tension nerve supply from the superior cervical ganglion is inhibitory. Both systems, however, are doubtless involved, since action over the seventh cranial is more effective when it follows action over the sympathetic nerves.

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[1] *Op. cit.*, p. 168.

[2] *Op. cit.*, pp. 376–380.

To put it briefly, it is with the realization that the clouds have a silver lining, with the consciousness of a new hope stirring within us, with the realization that the depressing and cheerless situation has a redeeming feature, and that the elements which would depress our spirits are offset by those that would lift us, it is *then* that we weep.

CHAPTER VII

THE LOVE EMOTION

"Armies, navies, kings, emperors—what are they, when Love holds the destinies of nations!" So begins a recent advertisement. As a descriptive statement this is, of course, a bit sensational, a bit dramatic. But as far as its direct implications are concerned it is no exaggeration. No single force, no single emotion, is more powerful in the life of the individual, in the life of the group, or in the life of the nation, than is the urge associated with sex and its emotions.

Few elements in our nature run deeper than those of sex. And we do not have to accept the extravagant contentions of Freudian psychology to realize this. We need but recognize the direct effects of sex upon our culture and our civilization. There is, in fact, very little of our social, political, or spiritual life, which does not show the marks of sex influence. And when we come to the fields of art and literature we find that the love emotion has been among the chief sources of inspiration. This is not so strange when we realize that it is within these fields that man has found his chief means of vicarious expression. Here, wants which were denied their normal expression could be realized in symbolic form.

The stimulus to all man's activity is to be found in his internal secretions. Without these there could be no wants, no ambitions, no ideals, and no aspirations. Man could not be moved to any great purpose or ideal if it were not for some felt need or some great longing within him. Chief among his wants, chief among the demands which are restricted in their expression, are those belonging to sex and the emotions of sex.

No wonder, then, that life's most ambitious period should coincide with the period of most insistent demand. No wonder that the greatest burst of idealism and sentiment should be ushered in with adolescence and with the first appearance of the sex drive.

Throughout the ages there has been nothing more potent in the life of man or more capable of bringing out the finest in his make-up, than the profound stirrings arising from this aspect of his nature. We may seriously doubt whether the tender dispositions of love and affection, or the qualities of sympathy, chivalry, and generosity, could have had any existence apart from the hormic secretions and internal irritants provided by the sex glands.

SPECIAL COLORING OF THE SEX EMOTION

Nature is not without design nor hereditary structures and functions without significance. All reflect that magnificent scheme by which life is maintained. Every function and every disposition, whether of feeling or of action, has its own particular part to play in that scheme whereby nature seeks to perpetuate and improve life in its various forms.

Emotions, too, have their place, and a place which is of no small importance, since they are the means through which nature guides and directs our conduct. Without them, life would lose its warmth, its glow, its charm. No other functions are any more essential to life, not even the mechanism of digestion and reproduction. And whatever is essential to its needs, nature cultivates and fosters by way of those processes of variation and selection which are basic to development. Through millions of generations, organisms possessing traits best adapted to life's needs have tended to survive and to reproduce, while others, by the same processes, have been eliminated.

Without emotions nature would be without a means of guiding human destiny. Emotions are the instrumentality through which nature forces the individual into ways which subserve natural ends. Through pleasant emotions it has made attractive those activities which make for the survival of the individual and the race. Through unpleasant emotions it has made unattractive those which lead to destruction.

But not only has nature given a pleasant coloring to activities according to their survival value, but it has reserved the brightest hues for the most essential activities, the darkest hues for the most destructive ones. During early youth when life's vigor and zest are at their maximum we see nature's ways most clearly. We see how it has lent its greatest charms and allurements to the pursuits which matter most; its pangs, its pains, and its hurts to those which defeat its purpose.

Now, the most pungent and alluring of all activities are doubtless those which surround the cultivation of sex and the adaptations incidental to the perpetuation of human stock. Nature has given them this distinction because of their significance for the race. In no case has nature needed to show more diligence, since in no case has the fulfillment of the function entailed greater sacrifice and suffering to the individual. Here, if ever, nature had to make sure of human devotion. It had to build a temple sufficiently attractive to inspire worship, a shrine with sufficient charm to stir man's devotion and willingness to serve. It is for these reasons and out of these conditions that sex has gained its prominence, its special coloring and significance.

ARE THE WAYS OF THE FLESH BAD?

Some there have always been who have favored a distinction between the "higher" and the "lower" aspects of our nature; individuals who have frowned upon the "purely physical," and who have regarded it as their distinction to be well above and far removed from its interests. They have even felt that their cultural status should be measured in terms of this removal, and that their salvation was to be in escaping their physical being, in escaping "that flesh which walls in the spirit." And, especially, would they avoid the life of sex. Upon this life and its interests they have looked askance, since, for them, it typified their lower nature. They have looked upon sex as something to be tolerated perhaps, but certainly nothing to be admired.

In this attitude they have been encouraged, to a certain extent, by the Church and by social legislation. Society, recognizing the dangers of promiscuity to the race, and recognizing the unusual power of the sex drive, has found it necessary to erect rigid barriers to its satisfaction. And the Church, always conservative, always an agency of support for instituted law and order, has looked upon sex indulgence outside the marriage bond as the paramount sin. In fact, Sin, as a descriptive term, has come to symbolize this form of transgression. To give consistency to this attitude, certain church bodies have never conceded that sex gratification, even within the marriage bond, was anything more than a concession to the Devil.

But whatever we may think of the attitude of the prude and the religious fanatic, of this we may be sure, that the individual who does not find nature's ways good, who can see nothing wholesome or beautiful about them, will not survive, or rather, his type will not survive. Whatever may happen in the future, whatever changes may occur through further development and evolution, we can at least be sure that those who survive will be individuals who have found nature's ways good. Prudes who are shocked by these ways will probably always exist, but only as eccentrics, never as a "species." As a species they will be as extinct as the mammoths of the plains which were eliminated in favor of other species and other forms of life better adapted to existing conditions.

CHANGING ATTITUDE TOWARD SEX

But the squeamish and prudish attitude is by no means typical of today. In fact, a very noticeable change has been in progress in the direction of a more naturalistic way of viewing the whole matter. In accomplishing this change wider education and increased enlightenment have been of chief importance. Sex education has been introduced into many of our public-school systems, and, despite opposition from the inhibited and conservative, special agencies have been fairly successful in distributing to the general public information on sex and its hygiene.

Educational measures such as these would not have been tolerated in the past. In fact, as late as the Renaissance scientists and anatomists felt the need of apologizing for any reference to the organs and functions of reproduction. In that day and almost down to our own time the merest mention of anything relating to sex has been strictly taboo. People of a few generations ago would, no doubt, have been horrified with present conditions. They would have seen in them an indication of moral decay, a loosening of moral standards, and a return to paganism and savagery.

With the lifting of puritanical vetoes, and with increased frankness on the whole subject, there has also been a change in attitude toward the transgressor, whether man or woman. Upon the latter, if found guilty, no end of shame and humiliation was heaped in the past. She was stoned, driven from the community, ostracized, or reduced to slavery. She was considered unfit to associate with her own kind. No such treatment would be conceivable today. Social disapprobation there still is, and probably will always be. But, on the whole, the attitude is much more humane and much less severe.

With a better understanding of the sex functions and with wider use of contraceptives, the danger to the offender and the chance for impregnation has been greatly reduced. This, in itself, has tended toward a more liberal attitude, since people are becoming reconciled to the idea that the seriousness of transgression should be measured in terms of its consequences. (Even those who believe in "absolute sin" are not going to carry their belief into practice by punishing all offenses equally.) There is, moreover, a growing tendency to question the legitimacy of codes governing sex relations. Many are unable to see how sex gratification is to be placed in a category with other forms of antisocial conduct. They fail to see how rigid restraint is to be made a virtue. They wonder just how any one is necessarily to benefit from the restraint. The "rights" of the prospective mate may be taken into consideration. But the one who remains chaste out of his or her regard for the rights of this mate, has no assurance that the latter will be governed by similar considerations.

The appearance of trial marriage and companionate marriage is, in part at least, a revolt against the rigidity of existing conditions. Those who have embraced trial marriage or the companionate relation as a desired alternative to the instituted relation, have done so out of respect for the sanctity of the legal ceremony, and because of traditional insistence that this ceremony should be considered binding, whether those bound were properly mated or not. Realizing the possibility of a mistake they have preferred trial marriage or companionate marriage. This offered the same protection as is granted by the state to the common-law relation, with the further advantage of obviating the difficulties of divorce should the parties to the contract prove incompatible.

WIDER IMPLICATIONS OF SEX

The very restriction of the sex drive in modern civilization has tended to distribute its expression. Numerous substitute outlets for the drive have arisen as a direct result. These outlets have been found not only in art and in literature, but in many of the more practical aspects of man's life. It is because of these substitute expressions that many objects and situations, only symbolic of sex or only indirectly related to it, have gained their sexual color and overtone.

Sex has ceased to be merely the internal excitements of the procreative act. It long since ceased to be the mere physical spasm which it is among animals. Even primitive men and primitive races have advanced far beyond this stage. For although love and romance in their present complexities may not have been known to the savage, although they could not be fitted into his simple life, yet love there was—fierce and untamed, perhaps—but love, nevertheless. Even he must have known the thrills of conquest, the allurements of moonlight nights, the charm and excitement of clandestine meetings.

For the savage, as for the civilized, love is more than appetite, more than momentary passion. The wide range of values which influence the choice of a mate show this most clearly. It is apparent in the appeal of different individuals, apparent even in polymorphous sex tendencies, that is, in the fact that most men and women have a streak of the Don Juan in their make-up. If mere appetite were involved, the lover would not, as sometimes is the case, tire of his object and seek another. There would not be the tendency to shift one's affection and allegiance from one type to another, according to the nature of one's experience. There is no universal preference for some particular type. And when gentlemen prefer blonds it is apt to be because they have seen too much of brunettes.

Variety may be the spice of life, but it is not equally so for all interests in life. It is less so in the case of appetite than in the case of the æsthetic. Where mere appetite is involved there are no Don Juan tendencies. The tippler and the winebibber do not feel the need of constantly changing their brand of liquor in order to satisfy their craving for drink. In matters of love, on the other hand, there may be the Don Juan with his interest in sampling the embraces and love possibilities of different women. It is because love is a communion of personalities, because it is a great deal more than physical gratification, that the individual is choice in his selection of a mate. It is for the same reason that variety rather than amount may become a factor in the absence of proper satisfaction. The story is told of a negro who, in giving his reason for seeking divorce, maintained that he "just done lost his taste for dat woman." That "taste" for the other party has a lot to do with successful lovemaking, and that factors other than sex influence this "taste," must indeed be obvious even to the casual observer.

SEX AND RELIGION

To the Occidental mind and to the one reared in the traditions of Christian orthodoxy, the association of sex and religion seems very strange. To our way of thinking sex and religion are distinct. The two are incompatible. Sex is Sin, while religion is concerned with the salvation from sin. But this attitude is comparatively recent, and is limited almost entirely to western teaching. In the lower stages of culture, religious rites and ceremonies are steeped with sensuous interests. The religions of the Orient, and particularly those of Babylonia and Asia Minor, are notorious in this respect. The priestesses of these countries have frequently been regarded as sacred prostitutes. Heroditus tells us that "Nearly all peoples, except the Egyptians and the Greeks, have intercourse with their women in the temples."

The tendency to associate sex and religion, and, on the part of primitive man, to introduce sex elements into religious rites and ceremonies is only further evidence of the deep-seated nature of sex. It shows the extent of man's preoccupation with its function. It also shows how far sex, even in the early cultural stages, was surrounded with an atmosphere of mysticism. Sex and its symbols would never have been introduced into the religious and magical rites of the savage if sex had not appealed to him as a mystic function.

As to the use of sex symbols, and as to how far they still survive in our culture today, Knight Dunlap reminds us that

> Many of the ancient symbols of religion were drawn from sex life and the sex organs. Designs such as the "American" cross, the ankh (also called the "key of life"), the inverted triangle, the pointed oval, and the crescent, each signify the female principle, and therefore the female divinity. Designs such as the taucross, the stable triangle, the fleur-de-lis, the spear or arrowhead, signify the male principle or male divinity . . . Many natural objects were similarly used because of their resemblance in form, growth, or odor to details of a

> sexual nature. Thus the dolphin and the fish, the pomegranate, the palm tree, the dove, the garden, the moon and the earth are symbols of the female; the goat, the spear, the fig leaf and the sun are symbols of the male.
>
> Symbols of "perfection," or the highest form of life, are uniformly conventionalized representations of coitus; hence they are also mystic symbols of "union." Frequently these symbols are constructed by mere combination of male and female symbols: the six-pointed star is the combination of the male and female triangles; the five-pointed star of the female triangle and arrowhead.[1]

One reason for our difficulty in understanding the early association of sex and religion is the change which religion has undergone in the higher stages of development. It has become a philosophy of life as well as a means of attaining mystic union with the deity. It is much more abstract than it used to be. In the life of primitive man it was a far more practical affair. The rites and ritualistic performances in which his religion was expressed were merely the means through which he secured a more bountiful supply of food and other material necessities. They were the magical rites through which he hoped to gain control over the secret forces of nature, through which he would influence supernatural powers, and thus secure in greater measure the needs of the here and the hereafter.

Just as primitive man hoped to appropriate the fierceness of the tiger by carrying the tiger's tooth or claw, just as he believed that he might be cleansed from the contamination of violated taboos by washing in ceremonial water, so, too, he believed he might stimulate the growth of his crops by the performance of an act related to growth. For this purpose the sex act seemed most appropriate. Accordingly, it was sometimes introduced in symbolic or actual form with the planting and seeding of the crops. Hunter folk have been known to seek the multiplication of their game animals by dressing as the male and female of the species and imitating the procreative act.

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[1] Dunlap, Knight, "Social Psychology," pp. 121–122, Williams and Wilkins, 1927.

It is possible that the emphasis upon ideas of origin and creation found in most religions is traceable to this early association of religious ceremony with the growth and multiplication of food supply. Once this association of religion with ideas of creation had become fixed it was only natural that sex elements and symbols with their creative significance should have been introduced. Dunlap says,

> The importance of the symbols drawn from sex characteristics and sex functions came about through the emphasis which religion universally places on ideas of creation and origin . . . The notion of a power above the world upon which man can depend, and as a means through which he can attain to the other life or escape this one, is inevitably connected with the conception of a power which maintains and rules the world, and which creates it.
>
> Of all the creative manifestations in the world, the creation of a new human being is the most highly significant to other human beings, and it is no wonder that the procreative act, and those things and processes most closely associated with it, should have deep religious significance. Moreover, primitive man who is more frank and pure minded than is civilized man, treated these matters with an explicitness which shocks our prudish temperaments, and which is therefore misunderstood. We can readily understand why primitive man chose as the highest symbols of creative power the human generative organs; and why he chose sexual union as the supreme symbol, not only of the original process of creation, but of the regeneration of the life which is to come.[1]

[1] *Op. cit.*, p. 123.

THE INFLUENCE OF SEX UPON CHRISTIAN ORTHODOXY

To suppose that sex has played no part in Christian orthodoxy would certainly be a mistake. That it has been unimportant in Christian ceremonial and ritual is true. That on the *positive* side its influence and contribution has been negligible is equally true. Yet, as a *negative* influence it has been a factor of the first importance. This is evident, *first*, in the fact that sex has been given a leading place in the category of Sin; *second*, in the fact that abstinence has been made a special virtue. In the forced celibacy of the priest and in the rigid restraint of the monk and the nun, we have the very best evidence of the significant rôle of sex, and the tremendous strength of the drive.

Sexual restraint could never have been made a virtue, self-denial could never have become a sign of purity or of holiness, if such restraint and denial were easy. Abstinence could be no sacrifice, and self-denial could be no virtue, if the individual did not feel that he was giving up something really desired. If giving up the pleasures of sex were not regarded by the devotee as a real sacrifice it could never have become an important condition of salvation. It was in forfeiting the right to these pleasures that the spiritual rewards were to be achieved. In other words, back of this asceticism is the socio-economic principle of reward according to merit, of earning a way to heaven by really giving up something.

It would be a mistake, however, to suppose that no other factors have contributed to this curious form of abstinence. The celibacy of the priest and the nun harks back to the conditions in the Middle Ages which fostered monasticism. The medieval monk withdrew into the cloister to avoid what he considered the contaminating influence of a corrupt world, and, most of all, to gain control of the flesh through special forms of penance and rigid self-denial. In accepting this life of seclusion and self-denial within the walls of the monastery, he was obeying the doctrinal teachings that the carnal and material world is evil and that salvation is most certainly attained through mortification of the flesh.

Sin being the cause of damnation, and the worst sins being those of the flesh, the monk and the recluse saw their best hope of escape from hell in the forced celibacy of monastic life. The nun, like the monk, considered it her chief virtue to have forever renounced the pleasures of conjugal life. Virginity like the white of her uniform was to be the badge and sign of her purity.

PHYSIOLOGY OF THE SEX EMOTION

From these considerations of the more general features of sex and its influence upon our life and civilization, we turn to its more specific features, that is, to sex in its physical and biological relations. While these are not as complex and are much more obvious they are far from being properly understood. In fact, one of the first things which strikes the student of the subject is the amount of misunderstanding which really exists, despite the excellent opportunities for correct information. We shall begin with a consideration of the body zones which show special sensitivity.

To define the limits of the body areas capable of yielding sensations of a sexual character is about as difficult as to determine the limits and confines of the sex emotion itself. This is because individuals differ with respect to these areas and with respect to the stimuli which affect them. Such differences are responsible for many of the perversions of sex, and for many of the cases in which unusual stimuli and unusual body areas gain sexual significance.

To these areas, whether directly related to sex and its functions or not, the term "erogenous zones" (from *eros* meaning love) has recently been applied. They include all those areas which show special sensitivity and which are capable of yielding sensations of a distinctly pleasurable or sexual nature. The sensitization of these areas appears long before sexual maturity is reached. In fact many of them are demonstrable in the infant a few months old. Thus, light touch or light stroking of a baby's lips, cheek, orbits, axillæ (armpits), lower ribs, thigh, and soles of the feet will evoke a smile, and, if continued, will result in giggling, laughter, thrashing of arms and legs, and mild squirming movements. That the child enjoys such treatment is apparent from its behavior and from its desire for repetition of the stimuli. Light stimulation of the sole of the foot, for instance, will sometimes cause the child to hold it up to be tickled again.

Just why this special form of sensitivity should appear in the child at this early age is hard to say. Some psychologists, notably the Freudians, are of the opinion that it represents the initial stage in sex development, and that the sensations derived from peculiarly sensitive areas are actually sexual in character. In support of this contention we are reminded of the close resemblance existing between the experiences of itching and tickling and those of sex. It is also averred, and this cannot be gainsaid, that in the mating process practically all sensitive and erogenous zones are under stimulation, such stimulation apparently serving to increase excitement and to produce a state of readiness preparatory to sexual congress. This would seem to be true of the amorous embrace, and of the fondling, petting, and caressing, so characteristic of lovemaking.

Even in animals sensitive zone reactions are not uncommon. When they occur it is typically as a part of the mating process. The billing of pigeons is perhaps one of the best illustrations. Preparatory to the sexual act, and following the cooing advances of the male bird, the female thrusts its beak into the mouth of its mate and goes through a series of adjustments very similar to those witnessed in the feeding of the young. That these adjustments have an excitatory effect is apparent in the fact that the feeding of the young will sometimes evoke the characteristic sexual response.

Turning now to the drive or the mating propensity as such, we find that it makes its first appearance during adolescence. Through youth and maturity it persists with relatively small change in intensity. With the coming of old age it again declines or disappears entirely. That the urge should in this way be limited to a particular period of life is itself suggestive of its close association with internal changes. We hardly expect to see children or grandmothers "falling in love," or developing any of the serious "cases" typical of youth. They are not apt to suffer from loss of sleep, loss of appetite, or from any of the other afflictions attendant upon this condition. They lapse into this state, not because of something in their environment, not because of an external stimulus, but because of an internal one. Of course, the individual who is lovesick does not blame his condition upon internal changes. He is more inclined to locate his trouble externally. It is that particular girl who is responsible for his restless and sleepless nights. For the girl in love it is that particular man who is the all-absorbing, all-important condition of her restlessness and distraction.

And yet it must be evident that except for internal irritants and tensions there would be no objective fixations. Except for hormic secretions the child would ever remain a child, and there would be no longing sighs, no wistful airs, no restless seeking.

The glandular secretions not only provide for these objective symptoms and for the tendency to fixate, but also for rather important internal changes particularly within the circulatory system. Redistributions of the blood supply occur which affect the organs and the tissues associated with sex. These become tumescent due to engorgement of blood with the result that contact and stimulation yield sex sensations. In the male the direct stimulus to sexual behavior is the gradual distention of the seminal vesicles, and the increased tonicity of the walls of these vesicles. In the female the excitatory changes are linked less with the distention of tissues than with the glandular processes involved in menstruation. The changes in the blood supply which provide for the tumescent condition of the sex organs, also provide for the readiness and prepotency of the reflex mechanisms involved in the sexual act. With the consummation of this act tension is relieved, and the organism settles back into a quiescent state not unlike that which follows the satisfaction of the hunger drive.

Another thing which the sex drive has in common with hunger is its periodicity. Food which loses its appeal after one has eaten, regains its attractiveness with the return of the internal craving. In a similar way sexual susceptibility tends to vary from time to time. Appetitive tension changes, not because of the external condition, nor even because of the presence or absence of the sex object, but because of the particular stage reached in the cycle of internal changes responsible for such tension.

These variations in susceptibility are more marked in animals than in humans. They are particularly noticeable in those species which have fairly distinct breeding seasons, as in the case of birds and insects. A bird which is not "in season" will evade or repel any advance made by a member of the opposite sex. Periodical and cyclical changes are also very much in evidence in the mammals. In most of these, sexual heat, so called, is recurrent every three or four weeks. Although somewhat less marked, cycles of a similar nature and duration occur in the case of humans. These cycles follow the period of menstruation. Before, after, and to a certain extent during this period, the individual is much more subject to sexual excitement than at any other time. Before the period there is stimulation of the internal sex organs through maturation of the Graefian follicle. This results in changes in blood pressure and blood distribution with increased tension and nervousness. Restlessness and a more agressive type of love-seeking would seem to characterize this period. Following the menses there is less tension and less nervousness. Susceptibility tends to be greater, the love disposition more submissive, and the internal sensory effects more pervasive and voluminous.

ATTRACTIVENESS IN THE OPPOSITE SEX

Attractiveness in the opposite sex is usually accepted as inherent, as something which requires no learning and no training. The charm and fascination experienced by the individual are supposed to hold no relation to learning or to experience. To a certain extent this view of the matter is correct. We do not *learn* to fall in love. We do not have to go through a special course of training to experience the sex urge. This is native. But can the same be said of sex *fixation* and of the tendency to associate sex gratification with one object rather than with another? Is there born within us some special form of recognition whereby a member of the opposite sex naturally and inevitably appeals to us as the appropriate object of satisfaction? Is there inherent in the plasmic processes of the brain something by which the young man perforce must find in the maiden so fascinating an object—should find in her, as James expresses it, "that beautiful soul, clad in that perfect form, so palpably and flagrantly made from all eternity to be loved"? Hardly. It is, in fact, a question whether anything, apart from learning and experience, is necessarily beautiful or ugly, necessarily attractive or repelling. But concerning this we shall have more to say in a later chapter.

The halo of perfection and charm which would seem to surround the object of sex attraction is, on the side of fixation, entirely a matter of learning. On the side of urge, it is native. That the youth enamored with his idol should find everything about her, from the minutest detail of her dress to the particular wave of her hair, things of beauty and of charm, is because these elements have all been associated with the object of supreme satisfaction. If it were not for an urge born in the very fiber of his being such beauty and charm would have no existence. If it were not for a craving, strong but unsatisfied, these stimulus elements would have no fascination. But they have to become *associated* with the idea of satisfaction in order to gain their affective value, and the more intimate the association the greater the affective value.

When the lover cherishes a lock of hair, a handkerchief, a glove, a slipper, or what not; when the bride affectionately stows away her wedding gown with other keepsakes, it is because these objects have been associated with experiences of high affective quality. The handkerchief, the slipper, or the photograph, stirs the same wave of feeling as the person or situation of which they originally were a part.

What is true of the emotional value of these elements is just as true of the individual with whom they were associated. If members of the same sex were brought up without ever seeing members of the other sex, and without ever hearing anything about them, their first appearance would be without sexual meaning or significance.

Briefly, the thing that is inherent is the impulse and the craving. The recognition of objects which will satisfy the craving is learned. We learn, not to love, but *what* to love, just as we learn, not to be hungry, but what will satisfy hunger. It follows that training in matters of sex is essential, and that perversions, as we shall see, are bound to appear in the absence of proper training.

WHY LOVE IS BLIND

Love is blind, and lovers cannot see
The pretty follies they themselves commit.
SHAKESPEARE.

We have observed that objects associated with a major demand tend to gain the overtones of that demand. The extent of this coloring or enhancement will depend upon the pleasure value of the demand with which the object is linked. Excess enhancement may prove so overpowering that we are blinded to other realities. It is to such enhancement and its blinding effects that Schopenhauer refers in his well-known commentary on our attitude toward the opposite sex:

> It is only the man whose intellect is clouded by the sex impulse that could give the name of fair sex to that undersized, broad-hipped, and short-legged race.

But with all his keenness of observation it is still Schopenhauer, the pessimist, who is speaking. For what he is saying about the beauties which would seem to inhere in the object of sex attraction might be said of the beauty of anything else. It is all a matter of experience, association, and organic need.

As love is blind, so hate is blind, and so prejudice is blind. In the grip of any strong emotion we are blind to all but the object of our passion. This object, or its image, so fills our mind that we forget all else. Accordingly, under the sway of anger, fear, hate, or love, we may be led to say and do things which at any other time we could not or would not have said or done.

The reason for the directional influence of an emotion upon ideas and reactions is to be found in the organic state with which the emotion is linked. This organic state has its effect on the mind. It tends to create a mental set favorable to ideas and to reactions associated with the satisfaction of the organic state. This is why the individual in love becomes "distracted," why his mind "wanders," why he continues to revert mentally to his love object. At the time all that seems to matter is the realization of his love dream. *She*, the object of his fixation, is all that matters. To have her and to hold her is all that is significant. This one-sided and unadapted state of mind, this obsession, this enchantment, will last—well, how long will it last? Until the energy of the drive has been released, or until other needs become more important, until other demands begin to press for satisfaction.

Love is blind because the individual in love is so all absorbed in the desirable features of his love object that he becomes oblivious to the undesirable ones. This is no less true in the parental than in the sexual relation. The fond mother cannot see the particular faults in her own child, faults which in the neighbor's child would be unbearable. We are unconscious of the faults of those we love because our attention is absorbed in their good qualities. Similarly, when we hate someone we become blind to his good points, while the bad ones stand out more obvious than ever. The staunch Republican may find it difficult to see anything good in the Democrat, and vice versa. The religious zealot cannot see the value of other teachings. He summarily discards whatever is not in accord with his own dogma. "Doxies," other than his own, are heterodox.

LOVE FOR MEMBERS OF THE SAME SEX

If sex fixation is all a matter of learning, opportunity, and experience, there should be nothing very strange or unexpected about love attachments between members of the same sex. These attachments, usually described as *homosexual*, may be of all kinds and degrees: they may be one-sided, or they may be mutual; they may involve physical relations, or they may not; they may be temporary affairs, not interfering with normal heterosexual fixations, or they may be permanent. It is in the event of permanent fixation that we have true homosexuality. In this case the individual sees in a member of the same sex the natural object of sex attraction. The suggestion of the normal sexual relation is apt to be as repulsive to him as the suggestion of the homosexual relation is repulsive to the normal individual.

Homosexual practices and homosexual relations are more or less to be expected wherever the sexes are isolated from each other. They are quite common in boy's and girl's boarding schools, in prisons, in the army, and in the navy.

Adolescent boys and girls living in segregated groups are very apt to experience homosexual desires. So-called "crushes" between girls living in institutions are very common. In fact their frequency sometimes calls for disciplinary action. Special rewards in the event such attachments are entirely avoided have also been resorted to as a means of curbing the tendency. It is particularly during adolescence that such crushes occur. An adolescent girl gains a special fondness for an older girl or for a teacher. The sexual implications of the attachment may go unrecognized by both. Special interest or special absorption in the personality of the older girl may be all of which the younger is aware. That a sex element is basic to this unusual interest may be apparent only in the occasional thrill experienced by the younger girl through chance physical contact, or in the wave of feeling passing over her when the older girl brushes against her.

It is generally agreed that homosexuality is more frequent among women than among men. That women are more restricted and more inhibited in their relations with men, while with their own sex they may be most lavish in their expressions of affection, may have had something to do with this. In his studies of love relationships between girls *outside* institutions (in which case we are much more apt to be dealing with true homosexuality) Marston found that "nearly half of the female love relationships, concerning which significant data could be obtained, were accompanied by bodily stimulation." In a study of female prisoners he found in one case that "some twenty or more out of a total prison population of ninety-seven were known to be carrying on love affairs with other women."[1]

While it is true that in most cases homosexual attachments are merely the chance fixations of adolescence and may be regarded as passing phases of development, they cannot therefore be treated lightly. In the training of every individual there should be ample opportunity for the formation of a wholesome attitude toward the sex relationship. Through properly supervised social functions (dances and the like) occasion should be provided for contacts which tend toward appropriate conditioning and fixation. But the trouble is that most parents see no need for training or education in this respect. In their ignorance they feel that their boys and girls are properly guarded and cared for when placed in a school where no opportunity for contact with the opposite sex is provided. Here they will grow up clean and pure. Nothing could be farther from the truth. Abnormalities of attachment may be formed from which the individual is never able to extricate himself, however much he may try.

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[1] Marston, W. M., "Emotions of Normal People," Harcourt Brace and Company, pp. 338–339, 1928.

INADEQUACIES OF SEX DEVELOPMENT

The characteristics which mark an individual as male or female, as man or woman, are not equally prominent in all. Men may be only "more or less" men, and women only "more or less" women. There are all degrees of masculinity and femininity. This holds not only for mental and psychic traits but also for anatomical and structural traits. An individual may be a man in his structural traits but a woman in his psychic traits.

When the organs of both sexes are combined in the same individual, he, she, or it is an hermaphrodite. In this union of male and female organs the traits of the one sex are usually dominant, while the traits of the other sex are imperfectly developed. To have the traits of both sexes equally present and equally developed is extremely rare.

It is of interest in this connection that the human embryo up to the end of the second month is hermaphroditic. Up to this time there is a common opening for the intestinal and urogenital tracts. This condition is normal in fishes, reptiles, and birds. Presumably, the embryo in its second month of development is duplicating the fish and the reptile stage in evolutionary development.

At the eighth week, then, the human embryo has the makings of either male or female. Development from this neutral stage takes place by a shift in relative position of different parts, and by more rapid growth of some than of others. This being the case, it follows that there are no structures in one sex which are not found in homologous parts in the other. The clitoris of the female and the penis of the male may thus be considered homologous structures. Both are in a tumescent condition during sexual excitement, and both, upon stimulation, tend to yield similar sensations. In fact, if the reactions of the sexes during sexual excitement tell us anything, and if these similarities in structure tell us anything, it is that there is very little difference in the emotional states and experiences of the two sexes during the preliminary and consummatory adjustments of procreation.

It would appear that the hermaphroditic condition is a result of improper development and differentiation, and that it represente a continuation of the primitive condition present in the two-months-old embryo. Regarding peculiarities in structure and function resulting from this condition, Morgan says that

> . . . the physical condition may not be pronounced enough to warrant the name hermaphroditism, but there may be some physical similarities of the other sex. For example, a man may tend toward the skeleton framework of a woman—a large pelvis, narrow shoulders, small bones, a feminine distribution of hair and a treble voice. On the other hand, a woman may tend to have a masculine frame, hard muscles, a coarse voice, and a tendency to grow hair on her face. Such conditions are due to glandular disorders and their only significance for psychology is the mental difficulties that such conditions produce.
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> In other cases there is no physical mixture of sex characteristics, but the individual has tastes and interests of the other sex. The boy likes to sew, to do fancy work, to keep house, to use cosmetics and perfumes, to frequent afternoon teas and bridge parties, or has similar interests. The girl of this type likes to wear masculine clothing, to engage in masculine activities, is apt to be rough in her behavior, in short is what we call a tomboy. In many instances such a tendency to assume the secondary traits of the other sex is accompanied by a tendency to cultivate the loves of members of the same sex. The girl, having the characteristics of a boy, makes a bid for the love of other girls. The boy, having the characteristics of the girl, makes a bid for the affections of other boys.[1]

SOME PERVERSIONS OF THE SEX EMOTION

Any tendency to seek sexual gratification through other than the normal means, or any tendency to find sex pleasure in other than the natural objects, is called a perversion. Of these there are a great many, most of them entirely harmless.

Fetishism is a very common perversion. It covers all those cases in which objects without sexual significance gain the potency of the normal stimulus, and tend to move the individual with feelings and emotions normally aroused only by the natural sex stimulus. The fetish, says Morgan,

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[1] Morgan, J. J. B., "The Psychology of Abnormal People," pp. 257–258, Longmans, Green & Co., 1928.

> . . . may be the hair, glove, handkerchief, lingerie, a mole, a dimple, a particular color of hair, and so on. The reason for the importance of these things is probably association with the object of childhood loves. For example, a case has been reported where a man could have no interest in a woman unless she wore particularly disreputable shoes. It was found that an old nurse whom he had when a child had worn shoes of the particular type he so much admired.
>
> In other cases the fetish may lead to depredations of one sort or another. Cases have been reported in which men have waylaid women, cut off their hair and permitted them to depart shorn of their locks. It is likely that many instances of peculiar thefts are based on this mechanism.[1]

More serious forms of perversion are those of *sadism* and *masochism*. The sadist finds particular pleasure in inflicting pain on others. His abnormal passion may lead him into torturing individuals who come under his control. Even animals may be subjected to the most vile and gruesome treatment. The masochist (more frequently a woman) shows the reverse trait in finding special gratification in suffering pain or injury at the hands of another. That these tendencies should have become associated with the individual's sex life, and should tend to bring sex gratification, can only be explained on the basis of chance conditioning, or on the assumption that they happened to become associated with satisfaction during some early stage in development.

Another perversion which may also have had its origin in a long process of conditioning is that of the

[1] *Op. cit.*, pp. 261–262.

"peeping Tom." In this case it may be supposed that the individual over a long period of time has been barred from all opportunity to gratify his curiosity with respect to matters of sex. The impulse in such an individual may become so strong as to lead to nightly exploits bringing him into conflict with the law.

Bestiality, or the abnormal love for an animal, is not a new perversion as may be seen from references made to it in ancient literature. The Old Testament refers to it as a particularly reprehensible sin punishable by death. In Exodus 22: 19, we read: "Whosoever lieth with a beast shall be put to death."

Such abnormalities of desire are not peculiar to humans. Hamilton, in his work with apes, found that "our phyletic cousins are given to masturbation, homosexuality, bestiality, and to the whole catalogue of sins for which our civilization is blamed.[1]

SEX WORRIES

Among the perverse expressions of man's sex life none is perhaps more familiar than that of masturbation. On the extent and the injuriousness of this practice adequate data are not available. But it is generally believed that the possible ill effects have been greatly exaggerated.

Peculiar notions regarding sex and its traditional association with Sin have had much to do with the fantastic beliefs popularly entertained in connection with autoerotic practices. No doubt it is the existence of these beliefs and their early inculcation which has been responsible for the frequency with which mental patients blame their condition on the habit of masturbation. That they should do so has tended further to fix the popular idea that insanity and other terrible diseases may result from this form of self-indulgence. As another damaging influence we shall mention the work of unscrupulous lecturers and drug concerns who have capitalized erroneous popular concepts and done their best to disseminate these concepts through pamphlets and scare literature.

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[1] Hamilton, G. V.. "Sexual Tendencies in Monkeys," *Jour. Animal Behavior*, Vol. 55, 1914.

Of the qualms, the worries, and the struggles through which many an adolescent boy and girl have had to pass the story will never be told. With the first awakening of his nature and with the occurrence of inner tensions, he realizes that the erogenous zones yield pleasurable sensations and that contact and pressure serve to reduce and to satisfy this inner tension. However, he has learned that sex is something wicked and that its expression and satisfaction is particularly reprehensible. Accordingly, his sex play is followed by an oppressive sense of guilt. He feels that he has sinned against God and his own nature. A young man who had been troubled in this way came to the psychological clinic for advice. He told of his unavailing devices to control his turbulent impulses. The walls of a log cabin where he had spent his summer showed a number of nails which he had driven, each one representing a failure, each one followed by a solemn vow that it would never occur again.

The very existence of social disapprobation, and the very attempt of well-meaning individuals to restrict any and every expression of sex, frequently leave the youth so inhibited that he lacks a confidant, and is unable even to discuss the matter with his parents.

The neglect of the latter is frequently pitiful. Take the case of a girl whose worry and distress finally brought her to the clinic. She had been impressed by social attitudes as to the wickedness of everything connected with sex and its functions. As a result, she had been left to get her knowledge of sex through her own experience. The unexpected appearance of her first menstruation following sex play had so frightened her that she thought something terrible had happened. This, as well as her dreams of the delights of love and of sex, she had come to regard as special manifestations of evil in her nature.

The danger oi autoeroticism, says Morgan, is not so much in the practice itself, as in the worry and the conscious after effects induced by self-consciousness and a sense of guilt. Furthermore, it may interfere with normal heterosexual fixations. The individual may never develop true love, because he is too much taken up with his own crude and immediate physical gratification.

HAPPINESS IN MARRIAGE

While sex difficulties and maladjustments are very much more frequent outside the married state, it must not be supposed that, with the advent of this state, all difficulties are, by some strange magic, swept aside. And yet, on the part of many this is just about what is expected. The ardent wooer, blinded and controlled by insistent demands, is apt to believe that with the ushering in of marital intimacies there will be nothing further to mar his perfect happiness. With such hopes there can only be a rude awakening. For with the energy of the drive released, with the entry upon a relation where such release is taken as a matter of course, the mate is apt to lose her previous halo of perfection. With other demands coming to the fore, life takes on a new complexion. The mate is seen in a new perspective and the capacity to satisfy other needs becomes more important.

With the honeymoon over the individual who has been so hopeful may become despondent. He may feel that something has been lost, that the relation which seemed to promise so much has lost its edge. Many who have been in this situation, or who have realized its possibility, have asked themselves whether this dulling of connubial bliss should be regarded as necessary or inevitable. Of the suggestions offered to remedy this situation the only ones which would seem helpful are those which recognize that the lapse in feeling tone is due to reduction in physical urge, and that something must be done to renew its force if the object of fixation is to regain its original charm.

Most married couples have known what a few days' or a few weeks' absence will do, and how such an interval of time may be sufficient to restore something of the old feeling, the old romance. After the period of absence the mate appears in the light of former days. All her distinctive features, more or less submerged in the rush of daily contact, regain their former meaning. In view of these facts it would seem that the exercise of proper restraint in marriage, with occasional marital vacations, should do much to preserve the tone and color of the original relationship.

Marriage is based on love and centers about its satisfaction. It follows that anything which interferes with its normal and natural expression will tend to destroy the harmony of the relation. Margaret Sanger, Miss Colcord, and others who have been specially interested in the causes of marital disharmony, have been convinced that sex difficulties are among the most frequent. These difficulties, they contend, are most apt to arise from frigidity or impotence, or from excessive demand on the part of either sex. Apathy and aversion for normal relations are also important. These are usually attributable to improper training, to religious teachings, or to crudities in lovemaking in the absence of preparatory wooing.

Margaret Sanger gives special attention to still another difficulty. It is the difficulty arising from the idea that men both before and after marriage must be aggressors, and that the rôle of women in intersex relations must always be that of passive submission. The frequency of male precocity in the love relationship is attributed to this attitude.

> For centuries women have been taught by custom and prejudice, especially in countries in which the Puritanic tradition dominates, that hers should be the passive dutiful rôle—to submit but not to participate. Likewise, men have been schooled by tradition to seek mere selfish gratification. This lack of constructive experience is responsible for the thousands of unhappy marriages and the tragic, wasted lives of many women, cheated by thoughtlessness and ignorance of their legitimate right to marital joy. Much could be accomplished if women could be taught to be active and men to check the tumultuous expression of their passion.[1]

Differences in training and experience of men and women are likely to interfere with happiness in still other ways. Men have been schooled more in practical affairs, women more in the arts of love and affection. As a result, men are very apt to permit their love life to sink to a practical level, while women still demand the attentions, affections, and wooings of former days. These differences in attitude and expectation are frequent sources of trouble in the marriage relationship.

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[1] Sanger, Margaret, "Happiness in Marriage," pp. 139–140, New York, 1926.

It is because so many enter marriage with false ideas and expectations that they are disappointed. They cherish ideals and fictions which have no basis in reality. There are still those who believe that there are born affinities, and who are assured that in the object of their affection they have discovered this kinship. For these there can only be disillusionment, coming, perhaps, with the first reproach, the first little spat or misunderstanding. Their false notions make it all too difficult to weather the period of adjustment upon which they must enter following marriage.

But fortunately the situation has a saving feature. Sooner or later the recurrent organic need again asserts itself, and Love, the great healer, steps into the breach created by the hasty word or the angry outburst. With this recurrent need tender feelings again well up within us and it becomes easy to forgive and forget.

CHAPTER VIII

EMOTIONAL DIFFERENCES IN THE SEXES

DOES the reality of being male or female, man or woman, exist merely in the differences in biological function? Are we male or female merely in type of reproductive organs, merely in our structural differences, or are we male and female in a still deeper sense? Are we sexed not only in structure, but in function, not only in emotional capacity and emotional disposition, but in our mental and moral traits as well?

Some have maintained that we do differ in all these respects—that we are sexed right down to the very last cells in our bodies. They base their statement on the extensive influence of the sex glands. These glands affect the development of practically every structure we possess. This is particularly in evidence at the time of adolescence when the sex glands begin to function. Many of our most distinct differences make their appearance at this time—differences in size, in skeleton frame, in body proportion, in power of voice, in distribution of hair, and, in the case of the male, in the development of a beard.

But our interest is less in these traits than in the emotions. Do the sexes differ in regard to these? Do they differ in type of emotion? In relative strength of emotion? From data available it appears that fundamental differences in these respects really exist, fundamental because our emotional reactions and tendencies vary with our glandular secretions, and these, as we have noticed, differ with the sexes.

To demonstrate the dependence of emotionality upon sex-gland secretions we shall consider some of the effects of transplanting the sex glands in the case of animals, and the effects of their removal in the case of humans. Steinach's experiments on guinea pigs are perhaps most conclusive. This experimenter, after removing the testes from a young male guinea pig, ingrafted in their place a female ovary. Upon recovery from the operation this male with the female ovary gradually began to show all the female traits both in appearance and in disposition. It would care for the young of other females and even try to suckle them. On the other hand, females with ingrafted testes showed the male traits. They grew to be larger than others of their sex. They were more quarrelsome and more inclined to fight, particularly with the males. They showed the usual male interests in the females, attempting both to court and to mate with them, however ineffectively.

In the case of humans, removal of the sex glands, sometimes necessary under diseased conditions, has yielded similar results. Castration and ovariotomy have marked effects when the operations are performed early in life. If not performed until maturity there may be little or no effect in behavior or disposition. Sex desire and sensitivity very often remain unchanged. On the other hand, the eunuch whose testes have been removed during infancy develops none of the interests or desires characteristic of the male. He shows none of the vigor or aggressiveness. His beard does not develop and his voice does not "change." In body proportion, size and appearance he is more like a woman than a man.

We may conclude, then, that men and women differ emotionally because they differ biologically, that men probably have more of the fighting instinct, and are more aggressive and pugnacious, that women have more of the parental instinct, and are more affectionate, tender, and sympathetic. But these differences between the sexes are less in evidence than the differences among members of the same sex. While men, on the average, may be more aggressive and women more sympathetic, this does not mean that it would be difficult to find a woman just as independent as most men, or a man just as tender as most women.

On the whole women are more excitable and more inclined to react emotionally than men. Whether this is a natural difference or merely due to training is hard to say. Women are also more variable emotionally. This is probably due to the cyclic nature of their sex life. During the menstrual cycle marked changes are noticeable in mood and excitability. These variations in threshold for emotional response are correlated with wider variations in blood pressure.

DIFFERENCES IN SEX DEMANDS

There is no very good evidence to show that sex demands are stronger or reach a higher level in the one sex than in the other. Actual and observable differences relate more to the fixation and expression of the urge than to its probable strength or persistence, more to the conditions of arousal than to its actual force or vigor.

Thus, while men are no more highly sexed than women, they are, nevertheless, more responsive and more susceptible to sex stimuli of all kinds. They are, moreover, susceptible to women *generally* as well as individually. No mattter how much a man may be in love with a *particular* woman he is still susceptible to the charms of others. For this reason it has been said that men are always in love, it is merely the object that changes. A beautiful woman, whether on the street, on the stage, or in the drawing room, is always an object of interest. If such arresting qualities did not seem to be inherent in feminine pulchritude artists would not take such pains to display it, nor would advertizers make such use of distinctly female traits, almost to the exclusion of the male, as a means of attracting attention.

In addition to being more susceptible to sex stimuli men are more easily aroused. Their sex demands lie nearer the surface, so to speak. This is noticeable in the fact that general sex interests more easily pass over into the specific form. Less preliminary stimulation, less caressing and wooing, are necessary in order to produce a condition of excitement.

General sex interests are less in evidence in women. Their interest in men is less obviously sexual. General susceptibility is also of a lower order. If a condition of excitement is to be produced, it is much more essential that a woman be in love with the individual and that she be approached by him through appropriate courtship and wooing. Related to this is the fact that a certain amount of experience would seem necessary before sex demands reach a very high level. Dunlap maintains that some women do not reach their full capacities until several years after marriage. But once fully developed their responsiveness to sex stimuli, and their demand for satisfaction, are just as great as those of men.

EROTIC PASSIVITY IN WOMEN

Traditionally and biologically a woman's rôle in intersex relations has been a passive rather than an active one. To advance or pursue has been considered the male function, to accept or reject the female function. The female might invite and encourage pursuit, but she could never pursue. She might secure the male's attention by appearing within his sphere of interest, but further she could not go. It may be because of this, because she has been schooled in love's acceptance rather than its expression, that her demands have become, not to love, but to *be* loved, not to woo, but to *be* wooed. This, at least, is Well's idea. For, while acknowledging that in actual force and extent women's love interests may even be greater than men's, erotically he finds them, nevertheless, quite passive. Their attitude in the love relationship is

> . . . something like what it would be if their mothers had been selected for centuries by the conventional caveman process. Typically, a woman's desire is *not* man, but to be desired *by* man. "I do not wish to please him; I wish that he should wish to please me." The love triumph of a woman is to arouse resistless passion in a man with whom it can be lived out. It is noteworthy that highly imaginative cavemen stories which occasionally find their way into literature are the work of women rather than of men.[1]

[1] Wells, F. L., "Pleasure and Behavior," D. Appleton and Company, p. 89, 1924.

Differences in sex trend of the type noted above have been observed in animal experiments. Particularly in the case of rats. In these experiments, designed to determine differences in sex drive, the male and the female rat (the female being in heat) are placed in different compartments of an experimental box. A passage connecting the two compartments is electrically charged so that the rat receives a shock when it tries to cross. It has been found that as much and sometimes more punishment, as measured by the charge or the voltage, is required to keep the female from crossing than the male.

The female's persistence in crossing to the male compartment would seem to indicate the rôle of the pursuer rather than the pursued. But once the crossing has been accomplished the true sex trend becomes apparent. For the female, while willing to overcome more resistance in reaching the male, ceases to be the aggressor as soon as the attention of the male has been secured. She feigns disinterest, and even flees, not, of course, into too inaccessible places, but sufficiently so as to stimulate male pursuit. Thorndike describes her behavior thus:

> The female responds by coy advances and retreats; the male by caressing pursuit and capture. The former is satisfied by, and so instinctively maintains, whatever augments the aggressiveness of the male; he responds similarly to the hopeful difficulties which her behavior offers. Capture and submission are responded to by the mutual absence of fear . . . and by the satisfaction which comes through bodily contact, including as the final element the contact necessary for the fertilization of the ovum.[1]

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[1] Thorndike, E. L., "Educational Psychology," Teachers College, Columbia University, Vol. I, p. 98.

DIFFERENCES IN INTERESTS

Man's love is of man's life a thing apart,
  'T is woman's whole existence; man may range
The court, camp, church, the vessel, and the mart,
  Sword, gown, gain, glory, offer in exchange
Pride, fame, ambition, to fill up his heart,
  And few there are whom these can not estrange;
Men have all these resources, we but one,
  To love again, and be again undone.
—Byron, "Don Juan."

In these lines Byron is not referring to love in its more restricted sense. The love which is "woman's whole existence," which is the dominant theme of her life, is not the erotic form discussed in the previous section. It is the love which she may expect from others, or which she may express in her relations with husband, children, and friends alike. The love for which she hungers may be the love and respect of her fellows as well as the love of the man with whom she hopes to realize her deepest emotions.

But if woman's interests as compared with man's are largely love interests, is this due to a natural difference? Byron hints that it is not. And, certainly, in the day of Byron it was not. The various avenues of expression open to men, "the court, camp, church, the vessel, and the mart," are, even today, not as open to her as they are to men. From her earliest childhood a woman is still made to understand that these interests are chiefly men's interests. She is brought up with a different set of ideals, and, by the time maturity is reached, has developed interests and aspirations that are social, interests that center about a home, about children, about social approval, and about her own status in her community. In many instances, she is denied the special opportunities for physical and mental development open to boys. From an early age she is made to realize that her lot is to be dressed, to be petted, to be loved, and that her greatest asset is to be acceptable and attractive to those about her.

With this background, *is* it so strange that a woman's interests should tend to center about persons rather than things? Is it so strange that correctness of dress, style, and appearance should become so very important? Or that she should find beauty contests, matters of form, and of etiquette, such absorbing subjects?

A boy's interests from the very beginning are quite different and much more diversified. He is encouraged along different lines. The attainment of skill and physical prowess are made to loom high on his life's horizon. Hunting, fishing, sports, and the great life of out-of-doors are cultivated with enthusiasm. Should a girl, on the other hand, show an interest in these activities, should she want to hunt, fish, or climb trees, she is called a tomboy. A boy, though less restricted, may also be subjected to ridicule if he shows interests proper to girls. He is a "sissy" if he likes to play with dolls, or if he shows too much interest in dress and appearance.

It must be evident from this that the interests of the sexes at an early age are superimposed. Adult standards are made the measure of what is fitting and proper. The child's life is not permitted to be sufficient unto itself. The boy is made to feel that he should be "a little man," the girl "a little woman." This is apparent in their apparel, if not in their behavior. It is really ridiculous in the extreme the way adults impose their own life and ideals on the child. Sex consciousness, for instance, is forced upon the child long before it is really sexed. Through differences in dress and behavior, through strange attitudes of secrecy, modesty, and shame—quite foreign to the child and quite beyond its natural experience—sex and the biological functions are brought to its attention long before they normally would. The little girl is given a doll to play with on the assumption that her "budding maternal instinct" craves this pastime. It is doubtful whether girls would show any more interest in dolls than boys if it were not for special training and example. In all probability this traditional pastime of girls was instituted through the eagerness of mothers to display at an early age the distinctly feminine traits of their young daughters. Boys are taught to assume a chivalrous attitude toward girls long before there is anything to prompt such an attitude. Girls are given to understand that they may be temperamental and react emotionally in situations in which men are expected to show control, such emotionality, again, being considered distinctly feminine. To weep as a means of social control, to scream when in danger, to jump on chairs and tables—the conventional manner of greeting a mouse—is perfectly all right for a girl but not for a boy. Because of these conditions, dispositions, which may vary with the sexes, are greatly exaggerated by the time maturity is reached.

How far the differences cultivated in the sexes through special training affect their deeper life is reflected in the difference in age periods during which suicides are most apt to occur. It is between the ages of twenty and forty, or the period when disappointments in love are most frequent, that women show the greatest disposition toward suicide. Suicides among men are more frequent between the ages of forty and sixty, or the period when misfortunes in business are most depressing.

INTERESTS IN DRESS AND CONVENTIONAL MODES

Women, largely because of their training, want to be liked, to be loved, and to be acceptable to the existing order. This, in itself, would tend to make them much more conservative. They want to be approved and so react in accordance with the approved. This shows itself in different ways, not the least of which is their devotion to style and dress, these being ways of making themselves attractive and acceptable. A man cares about these things, but not as much. To walk down the street in a disgraceful or non-conventional garb would bother a man much less than a woman. It may be for this reason that men make better clowns than women, men being less inhibited and better able to throw off conventional demands.

If women were not so concerned about appearance and social approval they would not fall such easy prey to the clothing manufacturers. In the name of "Paris," or of "Fifth Avenue," or in whatever name these manufacturers and designers declare themselves, they are able to secure well-nigh universal obedience to their dictates. With women it is what is "in style" or conventionally correct that matters, much more than what is beautiful. In fact, what is style soon becomes "cute" and "attractive." It would be hard to find any "permanent fashion" unless it is that of appearing youthful. Probably one reason why the clothiers have more of a time trying to lengthen the skirts than shortening them is because the former runs counter to associations established with youth. It is because the youthful figure is the only permanent fashion that women prefer to be slender rather than stout, and that they spend so much time and worry trying to diet and to retain the appearance of youth. Just as three times as much space is given to advertizing women's apparel as men's, so most of the advertizing relating to chemical and mechanical devices for keeping slender are directed to the female audience.

Women want to appear youthful because youth, as compared with old age, is a sex stimulus. And while being attractive to men may not be important in the case of some women, it is in the case of the majority, and the rest merely follow suit. Some women may say that they do not dress for men but for other women. But if the thought of other women is uppermost in their minds it may be because of feminine jealousies and because they do not want to be outdone in matters of appearance.

It is not that the desire for social approval is absent in men, but it is certainly much less pronounced. They are much better able to break away from the staid and the conventional. Women have never been the standard bearers of society. Innovations in art, in literature, in society, and politics have not come through their initiative. With them it is majority rule and majority demand that matter. But once an innovation or a revolution has been accomplished the fervor and support of women is as great as of men. Revolutions in government will be opposed by women, but once an established fact, they are its ardent supporters. Witness, for instance, the activities of the D.A.R. As Daughters of the American Revolution one might think them interested in revolutions. Not so. They are a patriotic organization and show their enthusiasm by opposing anything of a revolutionary character, anything suggestive of criticism of the established order.

THE DOUBLE STANDARD

In their moral conduct men and women are controlled by different standards. Generally speaking, men have a great deal more freedom. To "sow his wild oats" and even to engage in promiscuous relations has not been considered half as bad for a man as for a woman. *Logically*, there is no good reason why moral excrescences should be condoned in the one sex any more than in the other. And yet, with every people, and through all times, this has been the case. Men have never been required to live up to the same standards as women. This greater liberality has applied, not merely to sex, but to drinking, smoking, profanity, and to indulgences of every form. So much has this been the case that even moderate drinking or smoking of a woman has frequently been taken as a sign of general moral laxity.

The double standard is a product of tradition as much as anything else. Traditionally, man has been the master. Being economically more independent he has been less restricted in his behavior and in his morals. A woman's status has been a result of her economic dependence. She has been made to realize that her duty is to serve man and to pander to his selfish interests. Special extravagances which had no place in her own life might be afforded by man. No matter what a man's prodigality might have been he had a right to demand innocence and purity from the woman he married. His assumed "rights" might extend to even less important affairs. Had she been kissed, loved, or petted by any other man? These questions might be pressed for answer by any prospective groom. Her virginity and sexual innocence have ever been presented to a woman as her chief virtues. And while we may to some extent have gotten away from the time when a girl had to be pure, white, and unkissed, we still symbolize the special virtues of the bride in the white wedding gown and the bouquet of lilies.

Of the factors which have been responsible for the double standard the more serious consequences of promiscuity to a woman may have been quite as important as the traditional influences growing out of her economic dependence. That, today, the consequences to a woman from such relations are less apt to prove serious may have had something to do with the change noticeable in social attitude. Indeed, we should not be far wrong in assuming that the wider distribution of information regarding sex and the wider use of contraceptives have been among the chief factors in woman's emancipation. The movement today is away from the limitations externally imposed to those fixed by a woman's own nature. The increase in divorces, and, possibly, the lessened tendency to marry are indirect results of this.

IDEAL AND ÆSTHETIC INTERESTS

Sex differences more closely related to the emotions have been observed in the sphere of the ideal and the æsthetic. Interest in this sphere is closely linked with emotional trend. Individuals of high emotionality are very apt to be idealistic. It is true, certainly, of artists, who are noted for their emotionality, and who are easily carried off by purely idealistic and emotional appeals. It is true, also, at certain times in the life of every individual. Periods of high emotional fervor, periods of intense love, are typically periods of high idealism and aspiration.

That women show more interest in the æsthetic, the ideal, and the mystic may be entirely a matter of their greater emotionality. Some, however, have taken their special interest in these fields as a sign of special sensitivity. Greater interest in the æsthetic, for example, is believed to indicate special sensitivity along this line. But if this were so then why have women not been more active in this field? Why have women of the leisure class who devote so much time to art and æsthetics never become noted for æsthetic production? Why has a new phase of art never been created by a woman? Her training, no doubt, has had a great deal to do with this. Her creative powers may have been dwarfed by that aspect of her training which makes her a conformist. Being unable to free herself from the inhibitions fostered by her social environment she has tended to subordinate her natural capacities to the leadership of others. While being able to learn the rules of the game and being able to apply them as effectively as any one, she has been unable to break loose from the restrictions imposed by tradition and example.

Training may also have been a factor in the more general interest in the æsthetic—just as important perhaps as the more basic emotional influences. Wider cultivation of the æsthetic would naturally result where tradition and training have made a woman's interests center so largely about the attractiveness of her person, her home, and her surroundings.

As for interest in mystic phenomena—mental telepathy, astrology, clairvoyance, etc.—this may again be attributable to emotionality. Psychologists working in the field of psychic research have uniformly found more believers among women than among men. The booth of the seer and the fortune teller is also frequented more by women. That the palaverings of these individuals are concerned so largely with love and marriage is due entirely to the special interests of their followers.

Better church attendance of women may be ascribed to a number of factors besides emotionality. The æsthetic value of the service, the opportunity to dress, to drop home cares, and to get out and around may all exist as potential influences.

The writer was specially interested in the course of the belief study (discussed in Chap. II) to note the more obviously idealistic and conservative trend in the case of women. They appeared

> . . . more confident of the practicability of the Golden Rule, more assured that a democracy was the best form of government, more convinced that the world came into existence through the creative act of a divine being, more ready to question the human origin of morals, more desirous that monogamous marriage should continue to be the only accepted relation between the sexes. A group of college boys placed the latter far down in the scale of desirability.[1]

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[1] Lund, F. H., "The Psychology of Belief," *Jour. Abn. Soc. Psychol.*, Vol. 20, April, 1925.

INTUITIVE AND MYSTIC SEX PROPERTIES

> I have no other than a woman's reason,
> I think him so because I think him so.
> —Shakespeare.

There has always been a desire to throw about woman an aura of mysticism, to give to her the mystic touch, to believe that in this man-made world she provides the more sensitive and more mysterious component. Society has tried to play her up in this light. It has tried to enhance all those differences, real or apparent, which distinguish her from the male. By emphasizing these differences it has given her greater value as a sex stimulus, which, in fact, has been the real purpose in institutionalizing many of the differences in dress, manner, and behavior. Special traits believed to be distinctly masculine or feminine have been singled out for enhancement. To this end women have been more willing to concur than men. They have accepted and cultivated whatever traits have been held up as distinctive of their sex. On this basis many cases of peculiar and temperamental behavior may be explained.

Enhancement of sex is most in evidence in the specialization of dress. Particularly is this true of women's dress where charm and attraction is wrought through subtle forms of complete or partial concealment. The slit skirt, the flare, the less obvious symbols, the arrowhead (usually on the stocking), the butterfly design, and other suggestive elements are introduced for their value and interest as sex stimuli. The mystic design or appeal in feminine apparel is much less obvious now than when skirts were long and corsets and bustles were in vogue. Today, when dresses are short and the lines more obvious, less is left for the imagination. But the stimulus to male curiosity is still there in the suggestive elements and the subtle veiling intended to stir attitudes of interest and expectancy. Such elements are consciously and purposely introduced by the manufacturer and the designer. The purchaser, on the other hand, while recognizing the "charm" of some particular design may have no realization of its actual significance.

That women are supposed to be particularly intuitive, that they are supposed to have special powers by which they *directly* or intuitively sense many of the things overlooked by men, is only another aspect of the general attempt to endow them with mystic properties. It is in accord also with the popular idea that they are peculiarly sensitive. Some who have been particularly prone to marvel about women's "remarkable intuitive powers" have gone so far as to declare that nature has endowed women with these as a protective measure, that in its great beneficence nature has seen fit to provide them with this special sense as a protection against the more powerful male.

The concept of intuition itself is a product of inadequate appreciation of some of our mental processes. It is another example of the age-old tendency to introduce mystic concepts to cover phenomena not properly understood. Thus it is that ideas and perceptions which do not seem to have a direct or experiential basis have become known popularly as intuitions. But the fact of vagueness surrounding the origin of certain ideas is not a very good reason for invoking "intuition," or for supposing that these, like other ideas, could not have been derived from experience. That women have had less training in discursive processes, and are less inclined to analyze their reactions, may have had as much to do with "their unusual intuitive powers" as their desire to appear feminine.

SPURIOUS CHIVALRY AND SPECIAL DEFERENCE TO WOMEN

Why is it proper to congratulate the groom but not the bride after the wedding ceremony? Why is it proper for men but not for women to make advances in intersex relations? Why has social stigma, particularly in the past, attached to the spinster or the "old maid" but not to the bachelor? These differences in our attitude toward men and women seem to be direct results of differences in opportunity to marry. A woman, certainly, is just as interested in marriage and all that marriage entails. It is not because she is less interested in the social and economic aspects of marriage, or less interested in a home and family, that we may not congratulate her on her wedding day. In fact, that day has always been recognized as *her* day. Is it not she that is showered with flowers, courtesies, and compliments of every kind, *except* the direct ones? That we may not openly acknowledge her special interest in the event is perhaps the very best evidence that for her it is the event of events. If she had as good an opportunity as man to marry, if she were on an equal footing with him, there could be no objection to admitting her special interests. The flapper may, but the flapper does not enjoy the same status with her more reserved sisters.

In recent years decided efforts have been made to secure for women a place of equality with men. A great many of these efforts have been misguided, as indeed some of our feminist leaders are beginning to realize. Yet agitators for reform there have always been who apparently by "equality" have meant "special privilege," not realizing that special privilege can only aggravate the situation. They have demanded not less, but *more* "chivalry," not realizing that the chivalrous attitude is frequently merely a condescension to the assumed inferiority of women. They have failed to understand that special deference too often implies a *need* for special consideration. A man yields his seat to a woman because she is physically weaker and less able to endure the strain of standing. Similarly, in the acceptance of concessions socially there may be just as much of an admission of inferiority. For a woman, for instance, to take advantage of the right to weep in situations in which it is not considered proper for a man, is to allow that she has more of a right to be infantile, more of a right to yield to emotional weakness.

As long as men continue to make such concessions, and as long as women continue to accept them, inequalities will continue to exist even where they do not belong. We must realize that in social as in intellectual relations the individual shows his strength and independence by an attitude of deference and largeness. He shows that he feels secure, that he has nothing to fear, and that he can readily afford his liberality.

But much of our trouble today is a heritage from the past, a heritage from a day when women had to accept social and political inequality because of their economic position. But now that women are coming out from under their economic dependence they are finding it possible to rid themselves of many of their previous restraints and inhibitions. A larger life is being opened up to them. They are realizing a new freedom, and the frank open expressions with which the younger generation sometimes shock their elders should only be taken as healthy signs of the progress which is being made. With better opportunities for a career and for economic independence we may expect in the future to see fewer defense reactions, fewer "old maids," and fewer neurotics among women. Differential standards which hampered previous generations will be reduced, and, while admitting physical inferiority, women will not through special concessions have to admit social or intellectual inferiority.

INTELLIGENCE DIFFERENCES

People are much more willing today than formerly to recognize women's inherent right to equality. And, with their new opportunities for education and development, women have amply justified this recognition. Wherever a footing of equality has been established, and wherever impartial tests have been applied, many differences previously believed to exist have vanished.

In regard to intelligence there is no longer any reason for supposing that very important differences exist. No adequate data on adult performance are as yet available. But in as far as no significant difference in general level of performance has been discovered up to the age of twenty we can hardly expect to find any developing later.

That girls mature earlier than boys may account for a difference noted by Terman, namely, that up to the age of thirteen the average scores for girls on the intelligence tests are a little higher than for the boys, whereas after thirteen the boys do somewhat better.

It is of interest in this connection that even when intelligence tests give equality to boys and girls of the same age, girls usually get better marks in their school work. That girls appear to be more industrious, and, being more interested in social approval, are more willing to work for high marks, may have something to do with this. It is also possible that the teacher does not apply the same standards to the boys as to the girls. She may *expect* more of the boys, and may, in grading, take more account of girls' feelings. Girls feel the disgrace of failing much more keenly than do boys. That the teacher takes account of this is evident in the fact that girls actually have to be poorer in their work in order to fail, and have to be of lower intelligence before they will be assigned to the special classes arranged for the children of inferior intelligence.

But while there seems to be no important difference in general intelligence, differences do appear when attention is given to specific lines of interest. In high school and college girls excel, particularly in the languages and social sciences. They tend to be ahead of the boys in all those courses where linguistic and *memory capacity* are of chief significance. Men do better in the sciences and in mathematics. Since success in these depends upon ability to see relations and ability to apply principles, it is possible that men are superior in what we might call the *relating capacity*. Inasmuch as this relating capacity is basic to creative and constructive work it may account, in a measure, for men's greater achievements as composers and inventors. However, even in these differences which appear during school age we cannot overlook the possible influence of training. Special training would tend to make girls more interested in social and linguistic studies, men more interested in those bearing on mechanical and industrial efficiency

A WOMAN'S CHANCE FOR EMINENCE

A good deal of interest has attached to the fact that comparatively few women have become known for outstanding achievements. Cattell found that out of every 1,000 individuals achieving eminence only 32 were women. Similar results have been reported by other investigators. With the possible exception of literature there appears to be scarcely a field of production in which women's achievements have been what we might call exceptional. Even in those fields where they enjoy equal opportunity with men few have reached a very high mark. This is so in art and music where more women than men are actually engaged in study and production. Even as cooks and dressmakers men are said to do better.

What shall we make of these facts? Is it that intelligence of a high degree is more likely to occur among men than among women? Hardly. At least, if it is so, our intelligence tests do not show it. It is much more likely that men's physical advantages along with greater opportunity for continuous application have been the deciding factors. Women are handicapped by their reproductive functions, and, in some cases, by debilities due to the menstrual cycle. Not only so, but, as we have noticed in previous sections, she is still working under decided social and traditional handicaps.

To what extent these are the real causes for her inability to achieve eminence may be seen from comparative studies of the kind reported by Castle. These show clearly that as woman's social and economic conditions have improved, her possibilities for eminence have also improved. According to Castle half the women who have become noted have lived in the last century. But the fields in which distinction is achieved are still very limited. Of well-known contemporary women enumerated by Castle 55 or 51.4 per cent are writers, 20 or 18.7 per cent are musicians, and 14 or 13.1 per cent are actresses.

THE ORIGIN AND DEVELOPMENT OF SEX DIFFERENCES

Some of the most interesting problems relating to sex differences are those which concern their origin and purpose. How have they originated and why have they assumed their special forms? No difficulty, in regard to these questions, is experienced as long as we are concerned merely with the *primary sex characters* or those traits which are essential to reproduction. It is when we begin to account for the *secondary sex characters*, or those which are *not* essential to reproduction, that our real problems arise.

The primary sex traits—the genitals, testes, ovaries, and other essential glands and ducts—may be accounted for on the basis of *natural selection*. That is to say, we may assume that they have evolved and have been maintained by the same processes of selection which are basic to all necessary traits. These selective processes depend on two principles: *first*, the tendency for members of the same species to vary because of variations in the germ cells or reproductive cells carried by each individual, and, *second*, the tendency for individuals with traits best adapted to their environment to survive and to have more offspring than the less adapted and more poorly equipped individuals.

Such processes of natural selection might account for the development of any or all of the essential sex traits because those individuals who generated and nourished their offspring best would leave more to inherit their superiority, while the poorly endowed would leave fewer to inherit their weakness. They might also account for some of the secondary characteristics. Thus, they might account for the greater size of the male and for special weapons of offense and defense (horns, tusks, spurs, etc.) possessed by some of the animal species, since in the struggle and competition between rival males those best equipped for the contest would win out and leave more offspring to inherit their traits. And again natural selection could account for many of the sex traits in the lower forms which are more difficult of classification, for the special organs of sense and smell by which the male of some insect species detects the female, and for the special prehensile organs possessed by frogs and by some fishes, organs which appear to be necessary in order that the male may be able to clasp and hold the female during the breeding season.

But how can natural selection account for the existence of traits which could have no survival value in any of these respects? How could it account for the plumage, for the special coloring and ornamentation which distinguish the male of certain birds and animals? For the tendency in these animals toward display? For the dances and serenades sometimes performed during courtship? Indeed, the males of certain species have acquired their ornaments at the expense of some loss of power, at the cost of greater conspicuousness, and, therefore, increased risk from birds and beasts of prey. It has been supposed by Darwin and others that these traits can only be accounted for through *sexual selection.* We shall examine this principle more closely.

THE INFLUENCE OF ÆSTHETIC PREFERENCE IN THE DEVELOPMENT OF TRAITS

No very distinctive or universal trait could have developed by chance. This being the case it would be reasonable to suppose that distinctive sex traits which could not have evolved through natural selection must owe their origin to *their value as sex excitants*, or their value as sex stimuli. Frequent or even occasional preference of the female for a particular trait in the male would in time tend to perpetuate and exaggerate that trait.

The evidence for sexual selection as the basis for many secondary traits rests on the following: *first*, that many secondary traits do not appear until maturity is reached, and sometimes are present only during the breeding season; *second*, that the male frequently displays his attractions only during courtship and in the presence of the female; *third*, that special coloring and ornamentation tend to make the male an easy mark for beasts of prey; and *fourth*, that many of the special ornaments of the male are a definite handicap in the struggle with rival males, the comb, gills, and wattles of the cock, for instance, or the ball and socket ornament of the peacock, offer an easy hold for the adversary's beak.

That the male of certain species will dance or serenade for the benefit of the female during the breeding season, and in some cases will display his ornaments and attractions with elaborate care, can only be explained on the assumption that they have a sex value. This value may be of two kinds. It may be purely æsthetic, that is to say, it may presuppose æsthetic appreciation on the part of the female inasmuch as the song, the dance, or the display of the male, appears to attract, to charm, and to fascinate her. Or it may be that the antics and display of the male (perhaps purely involuntary and induced without conscious intent) have a more direct sex value, and, when acting on the female during a susceptible period, tend to induce attitudes of submission and the like appropriate to mating. But whether the brilliance and the display of the male act as direct or as indirect stimuli to sex, it is obvious that in some way they serve to facilitate the mating process.

Darwin, who was convinced that sexual preference has been instrumental in the development of many sex traits, points to the folly of supposing that "the male birds of paradise or peacocks should take such pains in erecting, spreading, and vibrating their beautiful plumes before the female all to no purpose." In support of his belief he cites the case of several peahens which, when debarred from an admired male, remained widows during the whole season rather than pair with another bird. In another case a particular male silver-pheasant (observed in the Zoological Gardens of Vienna) which had been the accepted lover of several females was deserted when by accident some of his ornamental plumage had been spoiled. He also cites the case of female pigeons which, having taken a special liking for certain males, could not be induced to mate with others. Darwin further states that:

> I know of no fact in natural history, more wonderful than that the female Argus pheasant should appreciate the exquisite shading of the ball-and-socket ornament and the elegant patterns on the wing feathers of the male. He who thinks that the male was created as he now exists must admit that the plumes, which prevent the wings from being used in flight, and which are displayed during courtship and at no other time in a manner quite peculiar to his species, were given to him as an ornament. If so, he must likewise admit that the female was created and endowed with the capacity for appreciating such ornaments. I differ only in the conviction that the male Argus pheasant acquired his beauty gradually, through the preference of the females during many generations for the more highly ornamented males.[1]

THE SEX GLANDS AS INSTRUMENTS OF DEVELOPMENT

Secondary sex traits are normally sex limited, that is, they appear only in the male or the female of the species. This is because their development depends upon the secretions of the internal sex glands. That this is so is apparent from the fact that they do not appear until adolescence, or at the time when these glands first begin to function. This does not mean that the hormic secretions *produce* the secondary traits. The essential elements and structures of the trait, as, for instance, of the beard, are present in the tissues long before adolescence. They do not develop before puberty, however, because they require the hormic stimulus. In fact, these elements and structures are present in *both* sexes but develop only in the one in whom appropriate secretions occur.

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[1] Darwin, Charles, "The Descent of Man," pp. 426, 427, 631, D. Appleton and Company, 1927.

Thus we may say that the male and the female alike inherit the structural elements from which the beard, or from which the mammary glands, might develop. But these elements remain dormant in the sex which does not have the glands producing the necessary hormic stimulus. The results obtained by transplanting the sex glands, or artificially inserting their products, show this most clearly. It has been found, for instance, that the presence of ovarian secretion in a male guinea pig will cause the mammary glands, otherwise destined to remain rudimentary, to develop and to give milk. Whenever a woman develops masculine features, or a man develops feminine traits, we may suspect the presence of improper balance and secretion of the ductless glands.

DO OUR TRAITS REFLECT OUR IDEALS?

If some of the traits peculiar to a species have arisen through sexual preference we may regard these traits as reflections of the ideals of that species. Just as the breeder impresses on his animals his own tastes and judgment, so too a species through long-continued sexual selection has expressed in surviving traits the ideals possessed by it.

In the peculiarities of the male, and particularly in those not essential to reproduction, we may see the ideals of the female, and vice versa. Long-continued preference of women for some particular trait would in time tend to impress that trait on the race. How the masculine ideal through sexual selection has been expressed in the female is stated thus by Darwin:

> The strongest and most vigorous men—those who could best defend and hunt for their families, who were provided with the best weapons and possessed the most property, such as a large number of dogs and other animals—would succeed in rearing a greater number of offspring than the weaker and poorer members of the same tribe. There can also be no doubt that such men would generally be able to select the most attractive women . . . It would be an inexplicable circumstance if the selection of the more attractive women by the more powerful men of each tribe, who would rear on the average a greater number of children, did not after the lapse of many generations somewhat modify the character of the tribe.[1]

Different standards of beauty, then, may account not only for sex differences but for some of the features which distinguish one tribe from another, one race from another, one species from another.

A man's beard, his most conspicuous trait—serving no purpose unless it be that of ornamentation—must have had its origin in the fancy for this trait on the part of some ancient female progenitors. That it is by no means universal would tend to support this. The longer hair of women than of men may have developed in the same manner as the male beard, although some have disputed that there is any native sex difference in this respect.

It is very probable that the roundness and softness of the female figure is a secondary sex trait, and that it has been acquired through special preference for this trait on the part of our male progenitors. This roundness and softness of the female figure is due to a thin layer of fat just below the skin.

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[1] *Op. cit.*, pp. 608–609.

HAIR AND BEARD

As already observed the beard, as a purely ornamental trait, is not present to the same degree in all races. Neither is it a distinctly human trait. Certain species of monkeys have a fairly well-developed beard. But, as in our own case, it is typically the adornment of the male. In the female it is quite deficient or entirely absent. Another parallel circumstance is found in the difference in color and shade of hair and beard. They may be the same, and frequently are, but when they differ the beard is apt to be lighter than the hair. In man it is often reddish.

It is very likely that the body of primitive man was covered with hair. The process of denudification probably took place through sexual selection, the absence of hair on particular surfaces having been accepted as a mark of beauty. The fact that women are less hairy than men might indicate that they were the first to be divested of this covering. While acquiring this trait they must have transmitted it equally to both sexes in the offspring. That men today are more hairy than women may be because for generations women have objected less to this trait than men.

There should be nothing very surprising in the suggestion that the absence of hair or partial nudity was considered an ornament by our ancestors, since the same seems to have been true in the case of certain animals. Darwin noted that

> . . . the faces of several species of monkeys, and large surfaces at the posterior end of the body, have been denuded of hair. This we may safely attribute to sexual selection, for these surfaces are not only vividly colored, but sometimes, as with the male mandrill and

> female rhesus, much more vividly in one sex than in the other, especially during the breeding season . . . The hair seems to have been removed, not only for the sake of nudity, but that the color of the skin might be displayed. So again with many birds, it appears as if the head and neck have been divested of feathers through sexual selection, to exhibit the brightly colored skin.

In confirmation of his belief that sexual selection has operated in producing the gorgeous coloring of the posterior parts and the oblique ridges on the face of the male mandrill, Darwin refers us to this animal's desire to display these parts (noted by everyone who has observed him in the Zoo) and, particularly, to display them during courtship. This is on a plane with the tendency for the peacock to display his tail under similar circumstances. Darwin cites the interesting behavior of a young mandrill when placed before a large mirror. After beholding himself for a moment in the glass he turned around and began to prance back and forth with his red hinder end toward the glass. This indecorous habit has been observed in a number of the baboon species in the presence of a stranger or a mate. "These monkeys," says Darwin, "are particularly apt to act in this manner, grinning at the same time, when first introduced to a new monkey, and also to their old monkey friends. After this display they begin to play together."[1]

PHYSICAL DIFFERENCES—THEIR ORIGIN

Like the males of most species, men are longer and stronger, more pugnacious and more energetic, than women. These masculine traits were no doubt acquired through the same process of selection as the one by which the males of certain species acquired horns and special weapons of attack and defense. During the long ages of savagery wives were won by the right of combat. This being the case the boldest and strongest men would leave more offspring than their less favored brethren. That men possessing these traits would be in a better position to provide subsistence for their females and their young would also tend to augment the trait. Under these conditions it is only natural that women should have evolved in the direction of beauty since the more powerful men would select the more attractive women.

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[1] *Op. cit.*, pp. 614, 636.

As to specific measurements of men and women at the age of twenty the following results have been obtained: In height the average man is about 67.5 inches, the average woman, 62.5 inches. In weight the average man is about 138 pounds, the average woman, 114 pounds. In body proportions women have wider hips and narrower shoulders. None of these differences is very apparent before adolescence. Following this period differentiation is most noticeable in the male. On the whole the mature female shows much closer resemblances with the child than does the mature male.

The proportion of fat to other tissue is greater in women. This excess fat is distributed in the breasts, the buttocks, and just beneath the skin. As already observed, it is the presence of this subcutaneous fat which gives the soft, round appearance to a woman's face and limbs.

The brain of the average man is larger than that of the average woman. The weight for the former is about

1,350 grams, for the latter about 1,275 grams. However, the range in weight for either sex is very much greater than this difference in average. But it is only in terms of absolute weight that man's brain is larger. When ratio of brain weight to body weight is taken into account, a woman's brain is larger.

In physical strength men are superior to women. This holds both relatively and absolutely. For even after account is taken of the fact that women are somewhat smaller and have less opportunity for development, a balance in favor of men still remains.

When physical growth curves are considered it is found that the difference is less marked at certain periods than at others. In fact, between the ages of twelve and fourteen girls are actually both heavier and taller than the boys. This is because girls mature earlier and because the period of most rapid growth coincides with the period of puberty, the period at which the girls exceed the boys.

CHAPTER IX

THE ÆSTHETIC EMOTION

ÆSTHETIC ATMOSPHERE—WHAT IS IT?

ART and æsthetics, like religion and politics, are rather uncertain quantities. Uncertain because their existence is neither fixed nor, to the senses, discernible. This vagueness and uncertainty surrounding art and the æsthetic is characteristic of every field of interest where emotions play a part. So much is this so that the sphere of emotion would seem to be the sphere of the uncertain. It is where opinions differ, where we are dealing with the vague and the indefinite, that emotions play their most significant rôle. It is where the character of the material is less well-defined that we give free rein to them, and that man chooses and reacts according to preference.

The uncertain quality of the æsthetic is reflected in the terms commonly used to describe it. These terms are typically suggestive of the vague, the mystic, and the indeterminable. Take, for example, the term "atmosphere," frequently used to describe that quality of attraction which would seem to inhere in objects with æsthetic value. This term carries a very obvious suggestion of the indefinite and attenuated. Thus, we hear of the "atmosphere" of a play, the "atmosphere" of a person, or the "atmosphere" of a work of art.

A wealthy lady who had gained a passion for *objets d'art*, or for antiques, and who had just purchased at a fabulous price an old chest of drawers which any good cabinetmaker could have reproduced for a relatively small amount, justified her action with the statement that "there is an aura and an atmosphere about an antique which cannot *possibly* emanate from a reproduction, no matter how perfect may be the reproduction." We may seriously doubt whether the "emanations" in this case are really æsthetic. More likely they are the "emanations" which belong to anything for which there is a popular fancy, and which therefore has grace, or, shall we say, has *atmosphere*. At an antique sale held in the Anderson Galleries in New York City during the month of April, 1929, a mahogany highboy brought $44,000, a wing armchair, $33,000, a mahogany chest on chest, $26,000. Well may the practically minded wonder how some old furniture can be worth that much, wonder how a highboy—excellent reproductions of which can be procured at less than $1,000—can be worth $44,000, the interest of which would bring $2,600 yearly for the rest of one's life. Such a highboy couldn't hold any more linens, shirts, collars, or pajamas than any other good chest of drawers. But, we are told, it is not for this reason that the high price is paid. It is not for *any* utilitarian reason. It is for the *æsthetic value*, for that in-de-fin-a-ble *atmosphere* which emanates from the old and never from the new.

Surely those who pay such prices for something because of its æsthetic and atmospheric qualities know what they are talking about. Surely when with such gusto they proclaim the virtues of their *objets d'art* they are not engaging in so much sentiment, so much verbiage. And yet, a good many intelligent and, we believe, appreciative individuals, fail to see how there can be so much more *atmosphere* about a weak, patched, and badly used piece of furniture, made, nobody knows just when, than about a new and less badly used reproduction of the same. They are apt to feel that it is not so much æsthetic value that is sweeping these fervent individuals off their feet as it is the present craze, the present boom in antiques. That the much proclaimed *atmosphere* is indeed evanescent may be seen from the fact that a great many antiques, and particularly the imported ones (the journey over the water is another thing that lends atmosphere), are not really antiques at all but are reproductions cleverly finished and made to appear like the real thing.

BRINGING THE ÆSTHETIC DOWN TO EARTH

What then shall we say of the indefinite terms used to describe the æsthetic? This, that they have come into use because the æsthetic itself is such an uncertain quantity. It has become overlaid with a lot of meaningless phrases because too many fail to appreciate just what it is. Not that the æsthetic, or rather, the æsthetic experience, is such a rare thing. It is no more rare than beauty is rare. But like beauty it is difficult to define or describe. The two seem closely related. For to be æsthetic a thing must also be beautiful. But typically it is when the beauty or attraction of an object is less obvious and less familiar, when it is more subtle and attenuated, that we speak of it as *æsthetic*.

But in getting at the æsthetic, in trying to determine its precise nature, less difficulty is encountered from the ordinary babblers, than from a group of specialists, connoisseurs, and artists who believe that in the æsthetic they have found a very exclusive, a very private sanctuary of experience, quite unknown to the masses. The æsthetic experience, they contend, is known only to a few select individuals, and to these only in very rare moments. This being the case it is not a subject for the psychologist or the scientist. It is quite beyond analysis and experimentation. The object of these individuals would seem to be to surround the æsthetic with an aura of mysticism. For this reason they oppose any attempt at analysis, any attempt to bring it down to earth. Their zeal is typical of individuals possessing the antiscience complex, typical of poets, mystics, and fanatics.

But we cannot be deterred by these gestures. And while recognizing the difficulties which confront us, we shall nevertheless try to discover the principles basic to the experience, the experience which is called *æsthetic*. We do not believe that this experience is as rare as the connoisseur would have us think. Nor do we believe that it is known only to a few select individuals, even though only a few might be able to define or describe it. We believe that the savage beholding the beauties of nature may be as conscious of the æsthetic as the artist. The difference, if it exists, is apt to be one of degree rather than of kind. There is, moreover, no reason for supposing that the æsthetic is something inherent only in the "highest" types of appeal, no reason for supposing that the gleeful negro who delights in some fast-moving, jazzy composition might not be under æsthetic motivation just as much as the musician listening to some more profound composition. We allow that exceedingly complex appeals appreciated by the latter may have no value for the former. But are such appeals not merely more rarefied and diluted?

In any event, an æsthetic experience which is only the peculiar possession of the gods, and a few select individuals, is not an experience with which we need be concerned. The æsthetic in which we are interested is within the range of all, though not equally or in the same measure. It is present, more or less, wherever beauty is present. It is present in *most* of our pleasurably toned experiences, sensory as well as associational. Yet sensory values are not nearly as apt to be called æsthetic as the associational. For while we may allow that colors and tones, or the sensations of sight and hearing, may sometimes be described as æsthetic, the sensations of taste and smell scarcely ever are. And even in the case of colors and tones it is typically when these are combined in particular ways that they are pronounced æsthetic. Thus it is the landscape, or that combination of light and color on the canvas with its associative and meaning value, that is called æsthetic. And again it is the particular *combination* of notes forming a melody which is regarded as æsthetic, rather than the individual notes which go to make up the melody. In other words, *it is to the higher overtones of experience rather than to the more pungent and sensory ones that we apply the term æsthetic.* It is probably because the sensations from the skin, the nose, and the tongue (these are sometimes called the "lower" senses) are too pungent and obvious that they are not classed with those having "higher" pleasure value.

DO ANIMALS HAVE ÆSTHETIC APPRECIATION?

Far from being the peculiar possession of a few exceptional individuals æsthetic appreciation of a rudimentary form would seem to be within the range of some of the lower forms. This is evident in the fact that most animals have the capacity to discriminate between objects on the basis of pleasure value, a capacity which must be considered fundamental to æsthetic appreciation. It is evident also, and more particularly so, in the attraction value of certain stimuli during courtship and mating. It is to the latter that we shall give special attention.

In the previous chapter we noticed that the males of certain species of birds, fishes, and insects are ornamented with brilliant and conspicuous colors, and in some cases are provided with organs of vocal and instrumental music. These traits are of no significance to the animal as far as its physical needs are concerned. In the struggle for existence they cannot possibly serve any useful purpose. In fact special coloring and ornamentation frequently interfere with the animal's safety by making it a more conspicuous mark for birds and beasts of prey. This being the case it would seem natural to suppose that they exist for their affective or pleasure value. To all appearances the display and ornamentation of the male function as attraction stimuli for the usually passive female, tending to induce in her a receptive state preparatory to wooing and mating. That they do indeed function in this capacity would seem apparent, if for no other reason, in their time and manner of appearance. Typically, it is during the breeding season and in the presence of the female that the male displays his charms—sings, dances, serenades. As stated in the previous chapter, these peculiarities of the male presumably have had their origin in sexual selection or preferential mating. That is to say, they have arisen and have been perpetuated through the preference of the female during many generations for the more highly ornamented males.

But whatever may have been the origin of these traits, and whatever we may think about their conditions of development, their existence, at least, we cannot doubt. Nor can we doubt that, inasmuch as they exist, it must be for a reason. Highly developed traits do not exist by chance. It cannot be supposed, for example, that the peacock erects, spreads, and vibrates his beautiful tail before the peahen all to no purpose. Nor can it be supposed that no significance attaches to the song of the birds and the rasping of the insects during the breeding season. Not that we need therefore go to the other extreme and suppose that these creatures are endowed with a special "æsthetic sense," nor that æsthetic values are consciously and reflectively appreciated, but merely that the traits displayed before the female in some way appeal to her.

Do animals then have æsthetic appreciation? The answer must depend upon how we define the æsthetic. If it is to refer only to that highly cultivated form with rare degrees of conscious discrimination, it cannot be supposed to exist in the animal kingdom. On the other hand, if it is made to include mere preference for certain stimuli because of their attraction value, then, by all means, a great many species may be said to have æsthetic appreciation, all of those, at least, in which special coloration makes the bird or animal a conspicuous object in its environment. It is noteworthy that such coloration is absent in all species with nocturnal habits. But these, it should be remembered are typically color-blind.

Some have maintained that the colors and the display of males have no æsthetic value but exist merely as stimuli excitatory to sex. There is in this contention a failure to distinguish between *attraction stimuli* and *sex stimuli*. The former, it is true, may facilitate or pave the way for the latter. Thus, attraction stimuli—appearance, song, dance, etc.—while without direct sex value tend to produce a condition favorable to sex. The influence of these stimuli is as obvious in our own case as in animals. A great many stimuli other than those of sex predispose us with respect to certain individuals and make us fall in love with one rather than another. In fact, all pleasure stimuli are facilitating to sex.

It is significant that stimuli which have attraction value for animals also appeal to humans. We are as attracted by their color combinations as by their song. A more gorgeous display of colors than that of the peacock's tail would be hard to imagine. This correspondence in types of stimuli which have appeal would seem to indicate that our own æsthetic sense has sprung from the same rudimentary source as that expressed in to the lower forms.

IS THE ÆSTHETIC SOMETHING IN THE OBJECT?

A question which has puzzled a good many is whether or not the æsthetic is something *inherent* in the object, or merely *an aspect of our mental reactions to the object.* Is the painting itself beautiful, or is it merely our experience of the painting which has this quality? Is beauty in the stimulus, *i.e.*, in the painting, or is it an aspect of our responses to it? Is it a property of the light and color reflected from the canvas, or is it something connected with our consciousness of these sensory elements?

Since the *meaning* and *associative* values of the picture cannot be *in* the picture but are merely suggested by the stimulus elements reflected from its surface, we must regard our consciousness of beauty as something limited to ourselves. That the same picture may suggest such very different things to different individuals shows this most clearly. Even the colors and their æsthetic value are not, in a true sense, *external.* Colors are sensations and cannot exist apart from the eye. Without eyes they could have no more existence than pain sensations could have existence apart from sense organs in the skin and internal tissues. The thing that is external in the case of color is the stimulus, that is, the light rays reflected from the object. The same object will have the same color at all times because its chemical elements will cause the same light components to be absorbed and the same ones to be reflected. Different objects have different colors because their composition is different and because they reflect different light rays to the eye.

That the æsthetic is something in the experience and not in the external stimuli which act on the sense organs and which initiate the experience is well illustrated in the case of melody. A melody is not something inherent in a note nor even in a series of notes, but in our experience of these notes when presented to the ear in a certain order. We hear merely one note at a time and only after we have reacted to a number of them following in a particular sequence do we get the consciousness of melody. Melody then is a *result* of that sequence of notes, and cannot be outside of us, since only one note is presented at a time.

The failure of most of the earlier accounts to discover the principles underlying the æsthetic has been due to an attitude purely objective, *i.e.*, to an interest in the materials of art (paintings, sculpture, music, etc.), an interest in the stimulus or the objective medium, rather than in the experience itself and the principles determining it. The object as a stimulus may provide for the æsthetic experience but it cannot itself be æsthetic. *Beauty cannot inhere in the object, but must be the possession of the individual.*

COMMON ELEMENTS IN ALL ART FORMS

It is this circumstance of viewing art objectively which has been responsible for the absence of recognition of common elements in the diverse materials which arouse the æsthetic attitude. The literary forms of art have been treated apart from the plastic forms, the visual apart from the auditory, the spatial apart from the non-spatial. Objectively, they are, of course, distinct. Objectively, there is no similarity between music and architecture, between paintings and sculpture, between a gem and a poem, a symphony and a cathedral. Subjectively, however, they occasion similar feelings which make them classifiable under one head, *the æsthetic.*

It is in making our approach subjective or psychological, in making our interest center about the experience rather than the object, that we hope to discover a more inclusive principle underlying the æsthetic than is possible by the objective method. With this approach our interest becomes very different from that of the artist. The latter sees in his art an attempt to express beauty in form, in color, in sound, or in movement. And yet is it possible that in these expressions we can find the real aim of art? Can the value of the artistic production be in the production itself? Is it not rather that the artistic production as a stimulus provides us with desired forms of experience? The picture and the melody as such could have no value except as there are individuals who enjoy them. The object of art must ultimately be a type of human experience. It must be the creation of symbols which will perpetuate experiences we have found good, experiences which ordinarily are too fleeting and too infrequent.

Common elements do exist in the different fields of artistic expression. That certain general and uniform requirements are discoverable is itself suggestive of a common principle underlying them. In musical design as in spatial design (painting, sculpture, etc.) we recognize such features as balance, symmetry, unity, and harmony. The same requirements for unitary and balanced construction hold for a melody as for a painting, for a dance as for a poem. In any or all forms of art rhythm and repetition play an important part. The same *motif*, the same dominant element, must run through the construction in order to give it the desired feeling of unity. Just as musical design calls for an "antecedent-consequent" relationship between different parts of the composition, so too in spatial design the lines drawn in one portion demand complementary construction in corresponding portions. Whatever elements have been favored in one section must be reechoed in sections with analogous place and function. The principle which is basic to these requirements, and, we believe, to the æsthetic, may best be illustrated through closer analysis of musical composition.

WHAT MAKES A MELODY?

The problem of æsthetics is greatly simplified in the case of melody because the elements of construction are so much more obvious and so much easier to isolate. It is no doubt for this reason that most of the experimental work in æsthetics has been concerned with the elements and intervals of musical composition.

What is a melody? The musician tells us that it is "a rhythmic composition of *related* tones, dominated by a single element, the *tonic*, and expressive of a characteristic motive or idea." If one had never heard or experienced a melody he would be none the wiser for this definition. It does not tell us what *makes* a melody. It does not tell us *why* a series of notes—ten, let us say—when combined in one way yields a melody, when combined in any other way does not. When we are told that these ten notes to yield a melody must be *related*, are we to understand that in one arrangement they are related, in another they are not? If so, then what are we to understand by *related?* The musician would probably answer that relatedness between notes exists when their arrangement allows for fusion and harmony, when each note seems naturally to blend and fuse with the one that follows. But such terms as *fusion*, *blending*, and *harmony*, do not *account* for melody, they merely restate the *fact* of melody.

It is because these descriptions are objective and merely descriptive of the stimuli that they fail to account for melody. Fusion and relatedness cannot be properties of the stimuli, they cannot be objective. They are properties of our experience. *Objectively*, there could be no more fusion or relatedness of notes when arranged in one way than in another.

THE PREPAREDNESS-FACILITATION PRINCIPLE

To account for melody, to account for any æsthetic experience, we must return to the physiology of our organism, and particularly to the psychology and physiology of our brain reactions. We should note, first of all, the conditions under which pleasure inheres in these reactions. One of the most important of these conditions is, that we should be *prepared* for the reactions we are required to make. When we are in a state of readiness for certain reactions it is pleasant to have them take place. On the other hand, to make reactions for which the response mechanisms are not in a state of readiness is unpleasant. Due to the way in which our response mechanisms are linked together we find satisfaction in having our reactions follow each other in a certain order. The performance is pleasant, not when it calls for a series of conflicting acts, but for a series of acts which lead naturally and smoothly over into each other.

Now one of the most obvious things about a melody is that the particular arrangement of notes which is pleasing is one in which the sequence of notes has a certain smoothness and naturalness about it. Our mental reactions to the sound stimuli are such as to follow "naturally" upon each other. One seems *prepared* for the successive responses touched off by the series of stimuli acting on the ear. It would appear that with the occurrence of the first few notes a set of expectations is aroused, expectations which are progressively realized as the melody proceeds.

The relatedness of a melodic series, or its *tonality*, must, in the last analysis, be a relatedness, not of something outside us, but of the mental reactions called forth by the stimuli acting on the sense organs. It is because our brain patterns are linked up in one way rather than another, and because each reaction leaves these mechanisms in a particular state of readiness, that we demand that the notes shall follow in one order rather than another. If those come for which we are prepared to react the arrangement seems *natural*, *smooth*, *pleasing;* in short, it is a melody. If others come they jar, they "get on our nerves," they are displeasing.

Even the pleasantness of musical intervals and chords, that is, of notes sounded simultaneously, may be explained in the same way. It would seem that simultaneously occurring notes blend according to the amount of overlapping in the vibration rates of the fundamentals and the overtones. Thus, the octave which gives the highest degree of fusion is also the interval in which there is the highest degree of overlapping in the fundamentals and overtones. The thing that is significant about this is that such overlapping calls for simultaneous reinforcement within similar and related reaction units, a fact which is responsible for the feeling of fusion and harmony in the mental apprehension of the interval.

THE ORGANISM AS THE BASIS OF THE ÆSTHETIC

We have noticed that the desire or demand of the organism at any given moment depends upon its condition, or upon the state of readiness in which previous stimulation has left it. This is apparent in other situations than those of melody. The idea of a particular engagement or activity may not appeal to us at first. Yet after getting all set for the activity we may be quite disappointed if we cannot carry it into effect. This influence of preparedness upon the affective quality of our demands is still more apparent in the case of our instincts. The instinctive urge becomes greater, its demand for satisfaction keener, as preparedness is increased, and as the stimuli acting are effective in increasing this preparedness. It is for this reason that the pleasure value belonging to the consummation of the urge increases according to the protracted nature of the preparatory reactions.

But what is true of the grosser pleasures is just as true of the more æsthetic pleasures, or those pleasures which are more rarefied and diluted. It is just as true of artistic appreciation as of purely physical performances, just as true of a good play as it is of good fiction. The "naturalness" and desirability of the sequence, whether it be the melody, the story, or the play, is due to the integration of successive elements, an integration which may be referred to as *progressive preparation within the* *reaction sequence*. In music the roughness of a sequence which "grates on one's nerves" as compared with the sequence which is smooth and pleasant, is all a matter of the condition in which each successive element finds the brain patterns. If, in this progressive preparation, what comes is in accordance with our state of readiness, our expectation, it is pleasing, if not, it is displeasing. The first part of the performance creates the setting and is rarely as pleasant as the last part, due to progressive preparation. Our desires are gradually being created, not only in a good story, but also in a good play or in good music. The desire and the preparedness being established it is pleasant to have the reactions take their normal course.

THE PRINCIPLE APPLIED TO PAINTING AND ARCHITECTURE

It is significant that the elements which all art forms have in common are in accord with the requirements of the preparedness-facilitation principle. Balance and symmetry, as elements common to the art forms, show this most clearly. Balance in a picture means that the elements of composition which have similar place and function call for similar reactions. Having reacted to certain elements in architectural design it is pleasing, natural, and easy to react to related elements. If in one portion of the design we have reacted to Gothic elements we do not want to have to react to Roman elements in another. Not that the elements of construction must be identical. This is no more the case in spatial than in musical design. We do not want identity, we do not want monotonous repetition. What we want is *continuity*, and *unity with variety*. A certain amount of repetition is pleasing but variety is stimulating. We like the feeling of unity and balance we get when lines and forms appearing in one portion are re-echoed or find complimentary construction in corresponding portions.

The harmony and unity then of architectural design depend upon a certain similarity in the structural elements, upon a certain relatedness in these elements comparable to the relatedness of harmonious musical intervals. The leading notes and repeated intervals of musical design are here paralleled by the repetition and variation of some dominant element in structural design. The presentation has unity, is "pleasing to the eye," because as we turn from one feature to another we are more or less prepared to react to each element on account of repetition or overlapping in the elements of the design. In the beautiful picture the congruency, coherence, and balanced relation of its parts bear the same tendency.

These facts showed up most clearly in some experimental work done by the writer.[1] In a portion of this work subjects were asked to complete certain figures according to æsthetic preference. In these completions there was evident a strong demand for repetition of the dominant element, for unity in variety, for balance and symmetry, with one part repeating yet reversing the arrangement of the other. The pleasure attending the experience of a distinct melodic trend was matched in these spatial designs by uniform demand for balanced construction and for beginning and ending on the same element.

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[1] See "An Interpretation of Æsthetic Experience," *Amer. Jour. Psychol.*, Vol. 11, pp. 434–448, July, 1928.

To our general theory of æsthetic value and the conditions upon which it depends it may be objected that sometimes quite *unexpected* stimulus combinations are pleasant. This goes to show that not all cases of the æsthetic are cases of *fulfilled expectation.* But it is doubtful whether there are any cases in which we are not in a measure *prepared* (perhaps not consciously) for the successive reactions if they are to give us pleasure value.

In connection with our special preferences relative to spatial design the question is often asked as to just why we should prefer regular linear combinations and smooth curves. The answer would seem to be that such regularity and smoothness is pleasing because of the facility with which such linear constructions are taken in perceptually. Irregular combinations are unpleasant because they call for conflicting and unrelated adjustments. Then again symmetrical arrangements have agreeable associational values because of their suggestion of law and order. In the smooth curve or the symmetrical figure any one portion is the key to the rest, and functions in much the same way as the leading note of a melody which arouses in us a "tonality attitude" or preparedness for the entire sequence.

May it not even be that our preference for the Golden Section (division of a line so that the whole line bears to the greater part the same ratio as the greater part bears to the lesser part, a ratio which may be seen in the ordinary envelope) is also dependent upon the preparedness-facilitation principle, since the mental transition from reacting to the greater part prepares us for the further transition to the smaller part? The two successive steps "downward" are in this case of the same magnitude.

THE INFLUENCE OF PRACTICE AND REPETITION

Any one who has had anything to do with concerts knows how ineffective a new and unfamiliar song may be as compared with some old and more familiar one. "Carry Me Back to Old Virginny," and "Love's Old Sweet Song," may stir the audience profoundly while any equally good but unfamiliar production will leave them relatively unmoved. The same phenomenon may be observed in the case of the lines and musical stanzas which are repeated in a song. These do not lose through repetition. The chorus does not lose through greater familiarity. Quite to the contrary.

This very obvious influence of repetition and familiarity upon emotional value should be expected in view of the preparedness-facilitation principle. The response mechanisms involved in listening to music become more closely linked through repetition. This in itself would have a facilitating effect. It would make the composition seem smoother and more natural. It is the thing which gives the familiar song its rhythm and its "swing." That older people are unable to enjoy the newer melodies is due to the same circumstance, since their lowered plasticity makes them less capable of forming new adjustments. They can't get *used* to the newer songs. The music of their more youthful and plastic years has much more appeal because of the greater ease with which the older and more familiar sequences are reinstated.

The influence of habit, custom, and repetition alone can account for the difference in Oriental and Occidental music, and for the difference in the scales and accepted intervals of these types of music. Only familiarity and training can account for our own preference for the Occidental, and the preference of the Orientals for the Oriental music. Only habit, training, and familiarity, again, can account for the fact that in the history of Occidental music there has been a gradual admission of intervals which formerly were considered dissonant.

THE INFLUENCE OF SUGGESTION AND ASSOCIATION

Just as habituation and practice may be treated as subheads under the preparedness-facilitation principle, so, again, the influence of association upon æsthetic value may be referred to the same principle, since agreeable associations, like habit and practice, have marked facilitating effects, while disagreeable associations have inhibitory effects.

Color preference is largely if not entirely a matter of association. Whatever the differences in experimental results on this subject, there is at least general agreement that the brighter and more saturated colors are preferred to dull, dark, and somber shades. But the former, it should be noticed, are uniformly associated with life and sunshine, growth, fertility, and florescence, the latter, with less desirable seasonal changes, with cold and winter, with death and decay. The type of preference for brighter colors which can be demonstrated in infants need have no æsthetic implications. It may merely be that they act as stronger stimuli to the sense organs, and therefore have more attention value.

According to Valentine, girls show a much stronger preference for white at from five to nine years of age than later. This may be ascribed to the manner of dress and the frequent admonition to keep neat and clean. That during adolescence and with advancing maturity pinks and flesh colors should be given high æsthetic ratings and should be more frequently preferred in garments may be an association phenomenon closely linked with sex.

The most marked effects of habit and association may be observed in connection with changing fashions. What at first appears strange and bizarre is soon accepted as "chic and smart." Whatever is the vogue gains a new value, while earlier styles, or those of another generation, become æsthetically unintelligible. It is no doubt because of decreased adaptability that older members of each generation fail to see anything æsthetic in the things preferred by the younger set.

To the above could be added many other examples emphasizing the importance of association. Preferences in sculpture and in painting have a large associative element. Preferred constructions are all suggestive of activities and circumstances with pleasant connotations. Even part of the æsthetic value of music, particularly as it appears in the opera, must be attributed to its associative and suggestive value in connection with dominant drives and emotions.

CHAPTER X

VICARIOUS SATISFACTION OF THE EMOTIONS

To one making his first acquaintance with that most thriving institution of American life, the lodge, there would doubtless be much to puzzle and astonish. Such an observer would have difficulty in understanding the decorum, the dress, the ritual, the pomp, and the display characterizing the functions of this institution. Particularly would he be mystified if he were to make a round of all lodges, of all the eight hundred or more societies and secret orders to which thirty million, or very nearly one-half the adult population of the United States now claim membership.

On such a round of observation he would be confronted with men in the dress and regalia of Indian chieftains. He would see others in the armor of medieval knights, others in the plumes and haberdashery of a Don Quixote. Men in togas, fezes, and oriental trappings. Men with miters and girdles, with plumes and epaulettes. Some would appear in the rôle of woodmen, and of hunters, others as prophets, rajahs, Brahmins, and seers. He would hear of oaths and of secrets, of passwords, signs, and countersigns, all reminiscent of the time when he as a boy played Indian, robber, or pirate. The orders themselves he would hear described as "mystic," "imperial," "ancient," "veiled," and "enchanted."

What significance could he attach to all this? What could he make of the ceremony, the ritual, the paraphernalia and display? How was he to understand the special appeals, the modes of address, and the high-sounding phrases? From a member of one of the orders he might learn that these organizations were instituted for social and economic reasons. Some of these reasons he might be able to see. But he could hardly be expected to trace all that he beheld to such sources. It was hardly for economic reasons that a normally sober business man would don a fez, drape himself in a toga, or subject himself to the tedium of memorizing long passages of ritual.

Indeed, even a man thoroughly familiar with the lodge, and entirely sympathetic with its views and methods, would scarcely venture an account of its existence in purely economic terms. He would realize that the economic advantages which might attach to membership in a secret order could hardly be considered the only incentives in joining. And certainly the striking phenomena to which we have referred could not be traced to such a basis.

For these, accordingly, we shall have to seek another explanation. This we find in man's demand for vicarious expression. It is as an illustration of this demand that we have introduced the lodge and its interests for discussion. In the ceremonies and functions of secret orders we have a very good example of indirect and substitute realization of emotional needs. To such functions and to such indirect and vicarious methods of satisfying emotional needs we may perhaps best apply the term *play*.

To really understand the special practices and manifestations of secret orders, we shall have to realize to what extent they represent man at play, adult man engaging in a form of make-believe. It is modern man, weary of his own civilization, but fascinated by the romance of another. Through the use of the dress, the ritual, and the symbols of another age, he would momentarily project himself into that age, and thus recover the feelings and experiences belonging to it. The assumptions of knighthood and chivalry, of mystic powers and insight, appeal to him in a day when there are no knights, or saints, or seers, in a land which has no chivalrous tradition, in a civilization which does not provide a normal outlet for man's most primitive and adventurous impulses. As long as existence is drab, monotonous, and thread-bare, man will continue to seek these outlets. As long as he lives in a world which through overmechanization has lost flavor and gotten out of touch with nature, he will continue to play Indian, Woodman, Knight, he will continue to be fascinated by a life in which heroism, hazard, and adventure are real.

THE NATURE AND THE EXTENT OF VICARIOUS EXPRESSION

It is in play and in the pursuits of a leisure hour that man's inner life is most clearly revealed. It is at such a time that we see the interests and cravings which lie deepest. These cravings are not material or physical, but mental and emotional. They are the interests which in ordinary life do not receive adequate fulfillment, and which can be realized only indirectly or vicariously, that is, in play or some form of make-believe.

During his spare moments man indulges mentally those pleasures and satisfactions which in his social and physical life are most restricted. In an idle hour he seeks these experiences vicariously in reading, in musing, or in play. We find him in places of observation and display, such as in music halls, art galleries, churches, and lodges. Typically, he is projecting himself into ideal situations. He is not, as in the hours of work, seeking the materials or instruments of life. He is seeking life itself, that which exists in its own right and for its own sake. He is revealing an inner life which bread alone cannot satisfy. He is revealing desires which cannot be consummated directly, but which can be realized only indirectly or substitutively.

These desires are not the same for all. They vary from individual to individual. The youth, with life's impulses strong, seeks the theater and the movie, there to pass through the raptures of lovemaking and the thrills of ardent romance. His elders, with these impulses less insistent, seek their clubs, their lodges, and meeting places. They indulge in music, in reading, or in reflection. Or they may seek refuge in a purely imaginary world, a world of dreams, a world reconstructed according to their special needs.

Art, fiction, and play, then, are the chief means through which man may have *mentally* the things which he cannot have *actually*. They represent a world that is ideal, not real, a world refashioned to meet his emotional needs. Where the real world fails to satisfy he seeks a substitute outlet. To this end the stage and the theater are admirably suited. The Church, too, provides a very significant outlet, particularly for the higher emotions, and for the aspirations more obviously ideal in character. In the ceremonies and ritual of the Church, in its symbols, spires, and high-flung arches, there is much that can lift man emotionally and move him ecstatically.

ART AND ITS FUNCTION

Art is one of the chief media of vicarious expression. It has as its aim the creation of objects and situations which provide adequate stimulation and satisfaction for our emotional needs. To this extent all media of indirect expression are art forms, since their object is virtually the same as that of art itself.

But this simple statement of the aim and function of art would probably not meet with the approval of a great many of those most concerned with art. Nor, for that matter, would any attempt at a definite statement or definition be likely to meet with general approval. How true this is, and how widely opinions differ, may perhaps best be seen from some of the views actually held.

First of all there are the mystics, and those of mystic inclination, who prefer to deal in abstraction, and who have defined art variously as "the outpouring of the creative flood of life in terms of personality," as "the expression of the Universal in the Concrete," and as "infinite values expressed in finite objects."

Then we have the idealists who see in art something ethereal and refined, something perfect and absolute, far removed from the ordinary plane of living. In the *works* of art they would see only the *by-products* of finite mind striving toward the infinite, toward something which it cannot actually attain. The ideals which inspire these works are appreciated only by a few select individuals who readily recognize beauty in nature and who reproduce it in art in order that ordinary mortals may benefit from their revelations.

And, again, we have the nature lovers who believe that the business of art is to interpret and to reproduce nature. They are convinced that nature is necessarily, ever and always, beautiful.

But we seem here to be dealing with sentiment rather than definition, with wishes rather than with facts. There seems to be an attempt to make art something objective and independent, something which might exist quite apart from man. There is no appreciation of art as a function or expression designed to satisfy specific emotional needs. Conceived as a human expression, it could not be that shadowy ethereal thing of the idealist. It could not exist as some rare detached quality appreciated only by a few. We may regard it as an integral part of the life of all, of the child as of the adult, of the savage as of the civilized.

Nor can art be something in nature, as many would have us believe. Nature is not, as they contend, necessarily beautiful. If beauty were an inherent and universal property of nature, then we should be immersed in beauty and loveliness all the time, and in no need of artists to point it out or portray it for us. But it is not so, for there are as many things which are unpleasant as pleasant, as many experiences which are unlovely as lovely, as many sensations which are offensive and distasteful as otherwise. Beauty is not a thing ever and always present or the artist would not have to select his landscape, the musician would not have to select his sounds. What is more, art does not exist as a reproduction of nature. If it did we should have to say that there is more art in the faithful reproduction of the camera than in the painting on the canvas. Art begins, we may say, with the departure from and not with the reproduction of nature. The materials may be furnished by nature, but upon these the artist must impose the rhythms of his own being. Beethoven in his "Pastoral Symphony" was not imitating the sounds of nature. He was selecting and rearranging these sounds according to his own sense of fitness, and according to the demands of his own being.

True, nature does occasionally present us with an experience which is highly satisfying. It may be in a landscape, a sunset, or a chance combination of sensory elements, that we discover the desired quality. We seize upon these experiences and try to perpetuate them through symbolic means. One rapturous ecstatic moment is seized out of the temporal flow and objectified. On the walls of his cave the savage depicts the high point of the hunt, that moment of success and exultation when his object was achieved. That too fleeting experience he would stabilize and make a more permanent possession.

Our own answer to the question we have already given. Art is a means through which man expresses a life that is ideal and emotionally satisfying. It is the instrumentality through which he achieves vicariously that which he cannot have actually, or that which is desired but which in ordinary life is inadequately supplied.

In a sense, art provides experience which is neither restricted nor censored. In music and in song, in painting and in sculpture, the artist may, for example, depict to his heart's content the object and the experience of love. Vicariously, the individual may have this experience without restriction or limitation. Thus it would seem that within the artistic and vicarious medium an entirely different set of moral standards obtain. The female figure, normally draped and concealed, may in art appear entirely nude or subtly veiled. A thing which would never be countenanced in actual life. The reason for this difference in moral standards would seem to be that the experience afforded vicariously through art is less apt to have the physical or social implications of more direct experience.

The excellence of the work of art must not be thought of in terms of the object itself, but in terms of its effect upon the individual. Certain general rules may be laid down for the construction of the art medium, but if these are genuine it is because they relate to principles which have universal appeal. Inasmuch as this is true, all art values must exist in the pleasing harmonious reactions which the *objet d'art* arouses in the observer. Any object, or any experience, we might say, which tends toward an æstheticism is art, whether the object or the experience be one of movement as in dancing, one of hearing as in music, or one of seeing as in painting. It is pleasure objectified, or pleasure made possible through a self-constructed medium.

As to the origin of art not much can be gained from a study of its history. What art is today has very little to do with what it may have been in the past, except in so far as certain art media, as media, have been perfected through the cooperation of successive generations. But art itself does not exist today because it has existed before. It would exist in any event. It did not have its origin in the crude tracings and primitive projections of the savage. It is born in each generation anew, arising out of cravings which are natural to the individual and which are in need of outward expression. That the expression should vary from time to time and with different peoples is because life itself is different, and calls for different types of fulfillment and completion.

EMOTIONS EXPRESSED IN MUSIC

The pleasure derived from music is not purely sensory. It is also associative. Important memory elements enter in which have high associative value for quite a range of emotional experiences. To the extent that music provides these emotional associations it may be regarded as a vicarious medium. Its vicarious capacity is due to the suggestive value of its tonal as well as its rhythmic elements. When tonal elements simulate the sound of the voice under given emotional stress, they serve to rearouse these emotions. In like manner, rhythmic units, through simulating the tempo of bodily reactions under given emotional sway, tend to rearouse these emotions.

Thus, it would seem that through the color and the intensity of the notes, and through the movement of the composition, the individual tends to be stirred by the emotions of which these elements are suggestive. The quality and the tempo may induce quite a variety of moods and dispositions. More decided and accentuated rhythms tend toward action. This is true of martial music. Slower and more somber melodies tend toward inaction and contemplation. The sweeter, softer melodies of the love song and the cradle song arouse the tender emotions. The slower and more tuneful sacred melodies stir the deeper and more reverent emotions. Quite different again are the dance melodies, and particularly those of the modern dance with their quick tempos and syncopated blaring sounds, very obviously designed to arouse the more primal feelings.

The fact that we speak of music as having *meaning*, and the fact that we may distinguish it as sacred or profane, as sensuous or reverent, is itself recognition of its vicarious capacity. So strong has been the feeling for this capacity that religious injunctions have been erected against certain forms of music. This is true in certain countries in the Orient. Mohammed regarded *all* music as sensuous and tending toward depravity. He urged all faithful Mohammedans to refrain from "this most dangerous diversion," and to be especially watchful of their wives when they showed signs of yielding to the allurements of song and of lute playing.

But here Mohammed presents us with a curious contradiction. For, while denouncing music as sensuous and as a means through which the primal urges might be indulged vicariously, he also made known that all who abjure music here on earth shall have it abundantly in heaven! "Whoso listens on earth to music or song," says Mohammed, "will be deprived above of the joy of hearing the sublime celestial symphonies and melodious accents of the Most High, Mohammed and David, inexpressible in their sovereignty." This strange contradiction is not peculiar to Mohammedanism. Other religions have prophesied the fulfillment in heaven of the things which the faithful must deny themselves while on earth. As though something might be bad here and good in the beyond. Ancient Hebraic doctrine awarded to the meek "the inheritance of the earth," despite the fact that the earth and the things of the earth are declared empty and vainglorious.

In the Koran's discussion of celestial concerts the contradiction is made even more pointed. These concerts, we are informed, are in no wise lacking in sensuous quality. For Allah himself regales his auditors with most luscious music until they swoon with pleasure, and until the physical surroundings tremble with his voice and Paradise sighs and rocks in its foundations. The climax of one such concert is reached when Allah with one grand gesture causes the heavens to open and "a shower of beautiful virgins" to rain down upon the enraptured audience.

MEASUREMENT OF EMOTIONAL EFFECTS OF MUSIC

Efforts to determine and to more accurately observe the effects of music have been very meager. The first attempt at measurement was made in 1887 when Lombard measured the changes of the knee reflex caused by music. A light hammer was suspended in pendulum fashion and permitted to strike just below the knee cap. The forward movement of the foot (the patellar reflex) resulting from the impact was then measured. His results were as follows:

Stimulus	Average, mm.
Silence	32.0
Music of a passing band	65.0
"Maryland, My Maryland"	64.0
Drum corps	51.8
Beethoven's "Funeral March"	105.0
Soft music	53.4
More thrilling	83.6
Quiet, 15 minutes later	29.0

More recently Binet and Courtier secured pneumographic records of changes in respiration resulting from music. Musical elements (tones and chords) presented in isolation proved relatively ineffective. More marked effects were noticeable in connection with melodies, particularly familiar ones. Sad melodies showed an average increase of 2.6 additional respirations per minute, gay melodies an average increase of 3.8 per minute. In the case of the former, the amplitude of respiration was slightly reduced, while for the latter it was somewhat increased. The following is a summary of some of the results:

Stimulus	Respirations per minute	
	Before	After
"Marche Triomphale"	9.6	13.5
"Marche de Fauste"	9.0	12.5
"L'Epée Chant"	9.5	14.0
"La Chauvauchée"	9.0	14.0
"Printemps" (chant)	9.5	13.0
"La Recontre"	10.5	13.0

But for our problem what do these results mean? This, that not only are the emotional effects of music very decided, but they are greatest when the composition has meaning and associative value. In other words, music is most effective when, in addition to its sensory value, it is able to suggest or to reinstate vicariously experiences which are agreeably toned.

PLAY

We all, at times, have the feeling that it is good to be alive. The joy of living is keen within us. We feel the need for more vital expression, the need of relieving ourselves from the pent-up state resulting from the cramped and restricted conditions of ordinary living. We may be aware of inner urges which are not satisfied in the activities of usual workaday life. With these feelings upon us we seek an outlet through activities which promise satisfaction. We create an object or situation which will provide the desired expression and the exercise of the desired function. In short, we *play*.

These states and feelings are not peculiar to ourselves. Animals have them. Abounding energy and inner well-being frequently lead them into all kinds of playful display. Witness the rampages of a young dog when released from the confining influence of his kennel chain. Or the behavior of cows and horses when in the spring they are let out into the green fields. The sheer delight which comes through activity and freedom of movement is evident in their capers, prancing, and snorting, their frolicsome leaping and cavorting. The play of the squirrel, the flitting movements of the bird, its twitter and its song, are evidence of the same. Schiller says,

> Nature seems to have provided most creatures with more than the necessary supply of bodily energy. The lion, when not tormented by hunger, and not challenged by other wild beasts, seeks expression for its unemployed energy. Full of ardour, he fills the reechoing forest with his terrible roars, and his exuberant force rejoices in itself. The insect flits about rejoicing in the life of the sunlight, and it is certainly not the cry of want which makes itself heard in the song of the bird.

Certain of the theories concerned with play have made much of the physical conditions noted in the above. They have regarded the presence of a given amount of unused energy, not merely as a condition of play, but as an adequate explanation of play. Thus, Spencer maintained that play is merely a form of physical catharsis or of useless exercise in which the individual rids himself of superfluous energy. But while granting that this concept might account for some of the dynamic features of play, could it account for the *form* play takes? If play is merely a convenient outlet for excess muscle and nerve energy, then why, in ridding ourselves of this surplus, do we not merely continue to work? Could the theory account for the fact that work may become play, as it may by introducing an element of natural interest, or by pretending, as in Tom Sawyer's whitewashing episode, that the work is really fun and quite a privileged occupation? Obviously, there are other motives for play than the mere discharge of unused energy. That the discharge should typically occur over instinctive rather than voluntary pathways is itself evidence of this.

There have also been those who have tried to account for play on a utility basis, or in terms of its *usefulness*. They have contended that the play of children and, in fact, of the young of most species, is a means of preparing the young for the more serious business of later life. Through play interests, nature is believed to have provided an important instrument of training. One of the favorite examples is the play of kittens. In their tendency to crouch and to pounce upon any moving object, we are supposed to see nature's means of training them for the function which belongs to cats, that of ridding the world of mice. Similarly, little girls prepare for the duties of motherhood by playing with dolls and dishes, while the boys prepare themselves for the handicrafts and for industry by playing with tools and mechanical toys.

But why introduce these utility concepts? Why not accept play as an end in itself? Why should the life and interests of the adult be considered any more *serious* or *important* than those of the child? And if we are to speak of ends, or of ultimate satisfaction, then why isn't the emotional satisfaction of the child just as important as that of the adult. We should have a very hard time indeed trying to show that the life of grown-ups is any more final or purposeful than the life of the child. Ultimately, neither serves any *useful* purpose.

In the case of the play of kittens, would it not be simpler to suppose that they have inherited certain reflex pathways, certain instinctive desires, which are brought into action when the animal is confronted with an adequate stimulus, in this case, a moving object of convenient size? And as for the special preoccupations of children, these seem to be largely learned and imitative. Children are possessed of an ego and a mastery impulse which find satisfaction in the imitation of grown-up performances. Such imitation gives them a sense of importance which they may show in their bearing, their manner, their strut and swagger. In any event, the theory could hardly be made to account for the play of adults, nor for the games of children which have little or nothing in common with the pursuits of later life.

The play of both children and adults frequently shows a resemblance to the simple activities of primitive man. This is true in the case of fishing, swimming, hunting, and the like. From this observation the theory has been advanced that in play we may see a harking back or a reversion to phyletic experience. It is supposed that inasmuch as our ancestors had to subsist on fishing and hunting, these activities have been handed down to us as instincts, with the result that the individual now finds pleasure in them merely as a diversion.

One difficulty with this theory is that it presupposes the inheritance of acquired traits, the possibility of which is seriously questioned. If anything is inherited, it is not the play function as such, it is not "fishing" or "hunting," but the tendency to engage in activities which possess the fascination belonging to these sports.

To sum up: Play is not just an overflow of superfluous energy, even though the presence of unused energy must be considered one of its conditions. Nor is it a means of preparing the individual for "more serious occupation," although it may prove to have developmental significance. Play is an activity worthy in itself and calls for no excuse or apology. *It*, and not work, is the elect life.

Accordingly, it cannot be a preparation for work. Play is an end, work is a means. The latter, it is true, may under favorable conditions become enjoyable, but when this happens it has ceased to be a means merely and has become an end as well, an end in that it has pleasure value, a means in that it has practical value.

In its more limited sense play is without practical value. Typically, it represents a function engaged in for its own sake, or for the sake of the feelings and emotions which accompany it. Frequently, it is an experience by proxy, a substitute or vicarious outlet for instincts and cravings inadequately released in ordinary living. For the most part it is a self-devised activity through which the individual would recover those feelings and emotions which experience has taught are agreeable.

This being the case we can hardly hope to find any single motive which could account for the countless activities which may be brought under the general head of play. The conditions which prompt play must be as varied as life itself, and as varied as the impulses which give rise to it. The most general and universal of all motives for play is probably that of *self-assertion* or of mastery. This very prominent demand of the human ego is responsible for the competitive element so frequently introduced into play, and for that great variety of games in which the object is to win through superior performance. It is the mastery impulse which brings satisfaction to the child in the games in which it reconstructs out of available material familiar objects and situations. The same impulse which brings delight in climbing trees, scaling cliffs, in swimming, skating, and the like. Mastery and the desire to project one's power is also expressed in the use of the bow and arrow, and other projectile contrivances by which one may accomplish something at a distance.

Social and sex motivation is also a prominent feature of a great many games, and particularly of those belonging to the adolescent and the adult stages. Even the child prefers to have playmates, and finds greater enjoyment in its game according to the number and importance of the participants.

Then there is the love of adventure which is an important element in a good many sports. In these, curiously enough, the individual seems to court danger and to enjoy taking risks. This would be true in the case of hunting expeditions and of tours into unknown regions. True also of many games of children in which there is an element of danger and of fear. The child going down the hillside on his sled, or making the steep descent on the scenic railway, must necessarily be experiencing internal fear responses. Apparently the thrill of fear is enjoyable when the situation providing it is without real danger. There is fascination in adventure and in taking risks so long as we know there is a pretty good chance of escaping without injury. It is this which has made big game hunting such a favorite sport. Secure on their mounts and surrounded by their retinue they may have the exciting experience of closing in upon the prey without encountering actual danger. But the allurement of the hunt, the expedition, and the roller coaster, would soon be lost if the sport became *really* dangerous and if the thrill of fear could not be successfully combined with the probability of conquest and escape.

FICTION AS A VICARIOUS MEDIUM

Fiction has much in common with play. It is a form of make-believe in which the individual seeks to rearouse mental and emotional patterns which are pleasurably toned. Its aim is to fascinate the reader through the elaboration of exciting events, events which purport to be real, but which in reality are constructed for the express purpose of providing for the reader an emotional and vicarious outlet.

Of course, the reader, perusing his story, is not very apt to see himself in this light, or to regard his preoccupation in terms of vicarious needs. Rather would he rationalize his interests and suppose that they have educational value. He prefers, while reading, to think of his story as true, as real. In this he is aided by the author who is careful to avoid inconsistencies and to keep his narrative within the limits of possibility. In fact, writers themselves are apt to place upon fiction a more favorable construction, and to regard it as "an interpretive process," or as "an elucidation of life and experience." In this attitude they are supported by the interests sponsoring fiction. Consider, for example, this advertisement for a magazine specializing in light fiction:

> What is fiction? It is humanity printed; it is life placed between two covers; the experience of every mortal contained in the printed word. The mere fact that fiction contains the recital of the experience of others proves its *educative* value, for one cannot learn about the virtues and faults of others without profit to himself.

This, obviously, is a rationalization of fiction. The aim, as here presented, is hardly the aim of the writer, and it is certainly not the aim of the reader. People do not *actually* read fiction in order to become educated. It is not education the individual is seeking when he reads a love story, and this is the typical story. Rather it is the fascination of passing through an experience substitutively, an experience which he desires but which normally is inadequately supplied. It is not a passion for information or for interpretation which gives such prominence to the love theme in literary and film production. We see it emblazoned in the headlines of movies and spread wide over the pages of fiction, because it relates to one of man's most deep-seated cravings, to a drive which frequently must be suppressed and inhibited because of existing moral codes.

Fiction, then, is an avenue of expression. It provides a convenient outlet for a great many interests which are dominant in the individual, but limited in their expression because of social and physical restrictions. It provides exercise for functions which cannot otherwise be exercised. Through it the individual may have mentally what he cannot have actually. Privately, he may have pleasures and recreations normally denied to him. He may have the joys of romance without incurring social risks. He may have the thrills of adventure without encountering actual danger. In short, in fiction he may have, at his own time and at his own pleasure, (though somewhat more mildly) all the thrills and the excitements of more eventful living.

But in order that fiction may provide these recreations it must be able to stir and stimulate the internal drives as well as to release them. No release is very effective if the drive is not first brought into a high state of readiness, and if emotions, through priming of the drive, are not adequately aroused before the release occurs. In other words, there must be something in the story to arouse desire as well as to satisfy it. The art of writing requires both stimulation and restraint. It is the art of stirring the emotions and yet holding them in check. Interest in the story is created by keeping before the reader the object of desire and yet withholding this object by constantly introducing new obstacles and difficulties in the way of fulfillment. It is only through such restraint and such difficulty of realization that emotions may be brought to their highest pitch. There would be no interest or emotion in the story if all were smooth sailing. There must be something of risk and of danger. There must be moments when eventualities appear real and when all would seem to hang in a balance. This mechanism of stirring interest and emotion is well illustrated in the case of the child whose interest in a toy is greatly enhanced by having the opportunity merely to observe its possibilities, or by having the toy held out to it and manipulated without actually being permitted to lay hold of it.

DAYDREAMING

Natural demands may express themselves vicariously not only in art, in fiction, and in play, but also in phantasy, or in what is more familiarly known as daydreaming. In the daydream or in the pipe dream the individual contents himself with a purely mental or imaginary realization of desired ends. He compensates for the insufficiencies of actual life by building up pleasant mental pictures of the world as he would have it.

In this imaginary world the usual difficulties are not encountered. Circumstances are more flexible and the facts of sterner existence are much more yielding. No longer does he have the difficulties of holding his job, or of getting along with his fellows. His superiors and those who in actual life have stood in the way of desired realization are less successful in the dream and are forced to recognize his merit. Of course, even in the dream there are limits. The dreamer feels the need of working consistency into the events, since the dream is most satisfying when kept pretty well within the limits of credibility.

The desire for wealth, power, and influence are among the things which motivate the dream. The classical illustration is that of the milkmaid going to market and carrying on her head a pail of milk which had been given to her. "I'll sell the milk," she mused, "and for the money buy a hen. The hen will lay eggs some of which I'll sell. I'll raise more hens and sell more eggs. I'll become rich, buy a house, have many servants and many dresses. Suitors will come to me, but I'll spurn them with a toss of the head." Very much absorbed in these fancies, she began to assume appropriate gait and bearing, and, the toss of the head actually being carried into effect, the milk was spilled.

Very frequently the dream starts from the recall of actual events which in some way have been disappointing to the dreamer. These events are rearranged and enlarged to form a more pleasing pattern. In this tendency toward reconstruction there is nothing very unfamiliar. It is a normal process and no doubt the basis, or the starting point, for most daydreaming. It may also become the basis for memory falsification, as in the case of people who are unable to distinguish between the imagined and the real, between what actually happened on a given occasion, and what they afterward only imagined. When the events of such an occasion are first related there may be a suspicion as to the correctness of some of the inserted details, but this suspicion does not last and is apt to disappear with later repetition. In this tendency toward reconstruction we have also the chief factor in promoting fish stories, in giving color to our experiences abroad, in making us the heroes of the episodes we love to relate, in accounting for some of the remarkable feats of our pets, and the equally remarkable achievements of our children and our relations. We excuse these reconstructions, these fabrications, because of their compensatory character, and because of their capacity to ameliorate the harshness of ordinary existence.

But there is another phase of both fiction and daydreaming which thus far has been almost entirely neglected. It is the case in which the story or the dream assumes the character of the tragedy, or in which the hero no longer is the successful conquering hero, but the unsuccessful and suffering hero. Thus, in the daydream the individual may picture himself as having a very bad time, as being opposed and misunderstood. All his misfortunes are greatly exaggerated. He imagines himself a martyr, persecuted for a just cause. Apparently there is as much as ever of the ego in this form of self-projection. To regard himself as the object of persecution, and as suffering out of regard for principle, increases his feeling of importance. Indeed, the effectiveness and the egoistic appeal of these fancied wrongs sometimes become very apparent when their objectification and verbal expression bring the hero or heroine to tears.

In the more healthy form of daydream—if daydreams can be considered healthy—such objectification is not very apt to occur. The individual is more likely to keep his fancied wrongs to himself, realizing that they belong only in the dream world. When, on the other hand, he reaches the stage where he is inclined to divulge them to others, his condition borders on the psychopathic, since the tendency toward objectification is an indication that the dream has come to seem real. Constant and private perusal is usually responsible for this. The patient, for so he really is, through continually dwelling upon his imaginary ills and troubles, can no longer keep them to himself. He begins to complain of unjust treatment, of persecution from his neighbors, from his relatives, or even from his immediate family.

Rarely, however, does the daydreaming propensity take on these proportions. When it does, it is because the individual is emotionally and temperamentally unstable, and, for this reason, inclined in the course of his dream to become emotionally stirred. In the dream world as in the real world the feeling of reality which may attach to an experience is very largely a matter of its emotional accompaniments. Accordingly, the temperamentally unstable individual, being more inclined toward emotional stirrings and emotional preoccupation, is also more apt to see reality where it does not exist.

Cases of delirium following periods of excitement and strain may be due to the same conditions. After days of such strain, the sufferer reaches the point where the images which have filled his mind finally become real. A mother who has lost her child may imagine that it has come back to life, that she is holding it in her arms, and able to stroke and fondle it as before. Similarly, in the "betrothal delirium" a girl, whose lover has been unfaithful, may imagine his love restored. She pictures the preparations for the wedding, the church bells ring, the ceremony is in progress, and wedded life begins. These experiences are lived through with all the intensity which might belong to the actual situation.

The manner in which imaginary experiences through prolonged emotional intensity may gain the semblance of reality is perhaps even better illustrated in the hallucinations which may harass the mind of the shell-shocked soldier. During the World War there were innumerable instances in which soldiers, very often boys still in their 'teens, after several weeks on the front became mentally deranged. The first signs of their condition became apparent in distressing dreams, and in a tendency to be excessively nervous and jumpy. Obsessive ideas of attack and of battle would prey on their minds. Finally these ideas would become real. With staring vision they would seize weapons and advance against an imaginary enemy. Or they would become violent, shriek and cry as if in mortal pain. This condition might prevail long after being removed from the firing line.

THE FREUDIAN CONCEPT OF SUBLIMATION

It has been our aim in these pages to give an account of the conditions which motivate art, play, fiction, daydreaming, and like functions. It has been our contention that these interests and functions owe their existence to natural demands which in normal life are inadequately supplied, and which, for this reason, are apt to seek expression through one or more of these ideal and vicarious media.

Now, Freud and his followers have been inclined to carry this concept of indirect and vicarious expression a good deal further. They have maintained that the energy of a major drive, lacking a direct outlet, may be drawn off or *sublimated* in activities quite unrelated to the drive. That is to say, not only is it possible for a given urge to seek a mental and vicarious outlet, but that it may spend itself in activities of an entirely different character. The energy of sex, for instance, may be converted or sublimated in interests as diverse as science and religion, as unrelated as art and industry.

Allport, in commenting on this unusual concept of sex sublimation, states that it would be nearer the truth to say that intellectual and scientific pursuits might be followed *in the interest of sex*, rather than assume that they are a substitution for or transformation of sex. There could be no direct satisfaction for sex in such pursuits, but sex might constitute a spur to achievement along these lines, since the attainment of a certain social and economic status is one of the pre-requisites to its fulfillment in marriage. Inasmuch as sex does operate in this indirect fashion, it becomes one of the most potent factors in progress, stirring man's creative impulses and stimulating his latent powers to maximum effort.

But it is hardly this indirect form of motivation furnished by sex that the psychoanalysts and Freudians have in mind when they speak of sublimation. For them, sublimation is a much more direct and vital thing.

The zoologist, they tell us, gratifies his sex interests through his research in the sphere of animal life. He has chosen his particular profession because of a peculiarly morbid curiosity for all matters sexual. He is, according to these, a "peeper" or "voyeur." The actress, they are convinced, is an "exhibitionist," an individual sublimating an abnormal desire for improper personal display. The surgeon is a "sadist," or an individual who has come to associate pain and the infliction of injury with sexual gratification.

It is the farfetched nature of these speculations to which we object. In the case of the zoologist, it is conceivable that a certain amount of morbid curiosity may in rare instances motivate his research. But is it at all likely that this interest should be general, or that such curiosity, through the mechanism of sublimation, should be transferred to interests, not only in the reproductive organs and functions, but to all facts of physiology and anatomy belonging to the science?

It seems equally extravagant to find in this drive the sole motivation for art and religion. Sex interests and ideals, as we have already observed, are doubtless expressed in art, and also, to a certain extent, in the rites and symbols of more primitive religions. But these are not the only interests. Paintings and designs in art, and rituals and ceremonies in religion, are frequently quite devoid of sexual reference, and only a morbid imagination could see in them anything even vaguely suggestive of sex. In his art and his religion man portrays his concepts of more ideal existence. He projects in more perfect form objects and situations adequate to meet his mental and bodily needs, needs which are not merely sexual, but which are as varied as life itself. The compensatory nature of these projections is evident in the fact that they include only those desires which are least gratified. Particularly is this true of religion and of its concepts of a future state in which complete and abundant satisfaction is to be achieved for desires which on earth are most restricted. But the enumeration of such desires typically excludes sex, probably because of the taboos surrounding it and because of its association with our physical and lower nature. The Mohammedan religion seems to be the only one to include it among the compensations to be achieved in the beyond.

In defense of Freudian doctrine it has frequently been observed that many of its extreme features would seem less extreme if it were remembered that a much wider meaning is given to sex than is usually the case. It does not refer simply to the procreative act, but to all of those functions and interests which have any direct or indirect bearing on the mating process, such as interests in clothes, adornment, coquetry, flirtation, in personal elevation and display, and in any or all of those means through which the *libido* or ego may seek expression.

But even with these extensions there is still much which would be left unexplained. Certainly, there would be nothing to account for the concept of energy conversion, *i.e.*, for the idea that practically all occupations and interests are sublimations of the sex drive. Our own idea is that a substitute outlet is effective only to the extent that it is related to the drive. Thus, the sex drive may receive an indirect and vicarious outlet in art only to the extent that the objects and symbols of art bear the necessary semblance or reference to sex interests.

And, again, the maternal instinct may be vicariously satisfied through the possession of pets, provided these, as objects of fixation, are capable of stirring the same affective and emotional responses as a child normally would. A cat, a dog, or a parrot, is able to become the affective symbol of the child, and function for it vicariously, only to the extent that it calls for the same adjustments of care and administration as in the case of the child.

But in such cases there is no *conversion* of energy. There is not an energy peculiar to sex which is diverted into a new channel. Bodily energy is bodily energy irrespective of the mode of expression. An instinct is not a form of energy pressing for an outlet, not a form of energy which may be transformed in the same way that the energy of the waterfall may be transformed into electrical or heat energy. An instinct is a function, a reaction tendency, and is identical with the functioning of the glands, the reflexes, the organs, and physiological patterns in which it is expressed. Apart from these there is no instinct, and apart from their exercise there can be no satisfaction for the instinct. The exercise need not be complete, it may only be partial. The glands may not be involved, and the reflexes and deeper-lying patterns may not be brought into play, but some of the patterns must be, whether it be those of the cortex and higher brain centers, or those of the lower centers. Otherwise it becomes futile to speak of substitution or sublimation.

In other words, there must be an overlapping between the direct and the indirect outlet, between the physiological units of the substitute function and those of the original, or there can be no satisfaction of a substitute nature. The overlapping may be purely mental and include only those patterns which belong to the association areas of the brain. In this case the pleasure value is less certain and less intense. In fact, it may be laid down as a general principle that this is true of all mental pleasures and of all vicarious expressions which are removed from their original source. Without a doubt the child of nature reaps more genuine pleasure than the man of culture, because the child of nature seeks his satisfaction nearer its source, while cultured man contents himself with its mental equivalents. The pleasures of the latter are derived and incomplete. But, being mental, we regard them as "higher" and more "spiritual," although they are really only the "lower," *i.e.*, the physical or instinctive, farther removed from their seat of expression. The fuller measure of life's enjoyment, which would seem to belong to "childhood's happy hour," is probably due to the fact that the child gets his enjoyment more directly from his instincts.

CHAPTER XI

EMOTIONS IN DREAMS

ON THE HISTORY OF DREAMING

HISTORY and literature alike bear evidence of the intense interest which has always surrounded the subject of dreams. From the earliest times the dream experience has been made the object of superstitious regard and mystic interpretation. The reason for this is to be found in the nature and the content of the dream. As an experience occurring during sleep, and in the absence of the usual sensory and bodily adjustments, it has not been understood. To primitive man it must have seemed very strange that, while occurring under these peculiar conditions, the dream should nevertheless seem very real to the dreamer. Little wonder that he should have been baffled by this experience and that he should have imposed upon it such strange and varied interpretations.

In the historic interpretations to which the dream experience has been made subject we see reflected contemporary views of man's conscious life. In times when man's mental life was regarded spiritistically, a similar view was taken of his dream life. It was believed that during sleep foreign spirits might take possession of the individual and become the cause of dreams. Depending upon the character of the spirit or demon the content of the dream would vary. Nightmares were due to the visitation of malignant spirits, while the pleasant wish-fulfilling dream was ascribed to benign and benevolent spirits.

More frequently, however, the dream was taken as evidence of the existence of the soul, or of a spiritual entity which might leave the body during sleep and pass through experiences all its own. Beliefs of this kind are common among certain tribes who have erected taboos with respect to the waking of a sleeping person. Death, they believe, might come to the individual, if the soul, temporarily severed from the body, should not have time to return.

A similar belief seems to have been entertained by Hippocrates (460 to 354 B.C.), the Father of Medicine, who was convinced that only the existence of a spiritual double could account for the dream. During sleep the soul or spirit hovered over the body, seeing, hearing, and feeling the things which were recalled in the dream. Lucretius (98 to 55 B.C.) was of the same opinion, and regarded the dream as an opportunity for the soul to rid itself of the usual bodily restrictions and to pass through experiences otherwise denied to it.

Even more widespread is the idea that dreams have premonitory significance. No very careful search of either modern or ancient literature is required to discover references to this belief. Along with this goes the idea of special powers of divination, or of dream interpretation. These powers are possessed only by certain individuals—dream doctors, they might be called—who are able to analyze the dream and tell its significance for the future. The best-known historic example of such powers is probably found in Joseph's interpretation of Pharaoh's dream. Pharaoh had dreamed of seeing seven fat kine and seven lean kine coming up out of a river. And the lean-fleshed kine ate the well-favored and fat kine. This dream was accurately diagnosed by Joseph as foretelling the coming of seven years of plenty and seven years of famine over the land of Egypt.

No doubt the seeming reality of the dream coupled with the well-nigh universal preference for mystic interpretation have been responsible for the persistence of such beliefs. There are still those who are convinced that dreams come true, and who are quick to cite as evidence a few striking examples in which a chance correspondence happened to exist between their dream content and subsequent events. Only a strong emotional bias can account for such selection, and for the acceptance of a few such incidents as evidence of prophetic significance, while the great many cases in which not the slightest correspondence exists are dismissed and ignored as trivial and unimportant.

People believe in the premonitory significance of dreams for the same reason that they believe in intuition, in hunches, in the reading of hands, of skulls, and of faces. They believe in these things because the idea appeals to them, fascinates them. And the fact that they can cite a few examples in support of these beliefs is sufficient to warrant acceptance. That other people accept them, and that they may find them confirmed in print, are other circumstances which tend to dispel any question which might arise as to their validity. And so people will go on reading their dream books and astrology texts. They will continue to visit the booth of the phrenologist and the mystic seer, in much the same way as the ancient kings and queens waited upon their prophets and seers to foretell their future and to interpret their dreams. As long as human nature remains the same, and as long as people remain uncritical and barbarous in their thinking, these phenomena will exist; and crystal gazers, necromancers, mysterious Madame Xs and weird orientally draped seers will not be without a profession or without a clientele.

MODERN DREAM DOCTORS

With the Freudians the status of the dream doctor or dream interpreter has again been restored to something of its former dignity. Once more we are being assured that the content of the dream is exceedingly important. But important, not in its relation to the future, but in its bearing upon certain psychic and subpsychic conditions. The dream, we are told, is symptomatic of the secret longings and desires which have been suppressed into the subconscious. This dramatization, this attempt to give importance to the dream, seems to have impressed the public and the man of the street more than anything else which modern psychology has had to offer.

In the picture presented to us by the Freudians and the psychoanalysts we have not only this idea of a submerged psychic realm, but also the idea of a psychic censor, an hypothetical agent which patrols the dream frontier and is responsible for the suppression of unwelcome thoughts, unpleasant experiences, and a host of desires and yearnings which conflict with accepted standards of propriety. But while thus banished from consciousness, these censored experiences and desires are nevertheless able to exert a profound influence upon the mental life of the individual, and may even become the cause of a great variety of mental and bodily ills. In fact, most cases of neuroses and border-line states of insanity are attributed to the clash between these restricted desires and the moral censor. Mental depressions and anxiety states are also ascribed to the indirect influence of suppressed material.

Now it is the contention of the Freudians that the cause of these disturbances is discoverable in the dream, since in the dream unsatisfied desires are expressed symbolically. Accordingly, it becomes the problem of the skilled analyst to interpret the dream, and through its content discover the offending complex. This process of analysis is by no means easy, since the suppressed material appears in disguise. Then again the true meaning of the dream is apt to be forced into the background in order to avoid the censor. What is remembered by the dreamer, or the so-called *manifest content*, may not be significant. The conditions which prompt the dream, or the *latent content*, uses the manifest content merely as a medium of expression.

It is, presumably, the lowered vigilance of the psychic censor during sleep which enables the suppressed material to emerge from the subconscious in the guise of symbols. In this guise the unsatisfied demands of the individual are permitted to play freely without arousing the suspicion of the censor. Their untrammeled expression tends to relieve the tension created by inner conflict. A complete catharsis, with restoration of the normal mental balance, can be achieved, however, only by having the skilled analyst delve into the dream and bring forth from the shadowy recesses of the subconscious the disturbing complexes. These the patient must recognize as the true source of his trouble, and, having recognized them, will be relieved of his symptoms.

But, as observed elsewhere, the really objectionable feature of the Freudian theory is the insistence that most, if not all, our mental ills are of sexual origin, that our suppressions are typically sexual, and that our dreams represent indirect and symbolic realizations of such suppressions. This is consistent with their conception of art and religion as similar indirect means of satisfying sexual interests. Practically all objects appearing in the dream must be regarded as symbols of the organs and functions of sex. They are merely the visible signs of a great complex drama unknown to the dreamer, but known to the analyst. In this extreme concept of dream symbolism Freud even goes so far as to say that "all complicated machinery and apparatus are probably genitals." To this an indignant chemist very appropriately replies that "if my dreams are sexual then my waking thoughts are sexual, for I dream of the same objects that I think about when awake . . . It is sheer insanity to suppose that my apparatus of which I dream at night represents sexual organs."

WHAT REALLY MAKES US DREAM

Inadequate appreciation of the physical conditions basic to normal mental life is probably the chief reason for misapprehensions with respect to dreams. As long as people have no understanding of the conditions providing for normal mental processes, and believe that these processes may be ascribed to the activity of a spiritual and independent agent, it is only natural that they should place a similar construction upon their dreams. It is noteworthy that spiritistic interpretations of dreams, insanity, and other phenomena, have run parallel to spiritistic interpretations of man's normal and fully conscious processes.

But if we accept the findings of neurology and mental pathology we should be as little inclined to give a spiritistic account of dreams as of any other mental phenomena. If all conscious life depends upon neurological processes, and if consciousness itself is a quality or an aspect of such processes, then the processes belonging to dreams must be of the same order.

Accepting this view of the matter, we should have to regard dream consciousness as a condition or result of discharges occurring in the brain during sleep. With this our problem is reduced to one of discovering the cause of the particular discharge, the particular response. This we shall understand better after a brief consideration of the conditions of sleep.

The essential condition of sleep is not, as some have supposed, the withdrawal of normal blood supply from the head. This supply may be as great as ever due to the prone position. A more important condition is the reduction in nerve tension and the reduction in nerve energy release within the brain. This is apparent in the fact that anything which will increase nerve tension, such as an exciting experience before going to bed or the taking of coffee or some other nerve stimulant, will result in wakefulness. Again, drowsiness is apt to result from poor ventilation and from the use of drugs and toxins which "dull the senses," or rather, which reduce the functional capacity of the cortex (the outer layer of gray matter in the brain).

Now it is because all areas in the brain do not simultaneously sink below the functional level that we dream. Our dream consciousness is inherent in the partial activity of areas in which discharges still occur. The confused and irregular nature of the dream is due to this irregularity in the functioning of different, and sometimes, quite unrelated brain areas. It is the same condition which is responsible for the limited range of associations and the absence of normal critical capacity. The associative reactions which in waking life hold our ideas in check do not occur. There is no unified action of the cortex, and nerve processes merely follow the paths of least resistance. During deep sleep there is probably very little if any dreaming. Such data as is available on the subject would seem to indicate that most dreams occur in the periods of falling asleep, of waking, and in periods when sleep is shallow.

WHY DREAMS SEEM REAL

The restricted nature of brain activity during sleep is as much responsible for the seeming reality of the dream as for its bizarre and incoherent content. The limited range of associative response enables the dreamer to accept, in a manner wholly uncritical, combinations utterly absurd and ridiculous. Not until waking consciousness sheds its more complete light do we realize the absurdity of the dream.

The significance of these facts relates not only to the dream, and the seeming reality of the dream, but to the reality of any experience, of any belief or perception. Whether an experience is to be accepted as real or imaginary depends upon the context into which it enters. In our waking life purely imaginary concepts are recognized for what they are because they do not harmonize with sensory impressions received from the outside world. But in sleep our mental and imaginary reactions go on unchecked by any impressions from the physical world. The thing would seem to be this: *Any idea entering the field of consciousness unchecked will be accepted as real until it is contradicted.* The dream seems real because of the absence of restricting patterns, and the absence of that general body of ideas which in ordinary life holds our ideas in check. If, in ordinary life, the idea that I am very rich comes to mind, it is quickly dispelled by the awareness of a slender purse, and by a group of associated circumstances which immediately force themselves upon me. On the other hand, if this idea occurs in a dream, in the absence of restricting ideas, it is compelling to the mind and is accepted as genuine.

We may, as William James reminds us, dream of a horse with wings, and as long as that horse appears only in the dream world it seems real, since there is no difference in the reality of the horse, its wings, or its place of existence. But if with this horse we should make an inroad into a *world otherwise known*, and say, for example, "This is my old mare Maggie who has grown a pair of wings where she stands in her stall,'' the whole case is altered; for now the horse and place are identified with a horse and place otherwise known, and what is known of the latter is incompatible with the former.

This is all in accord with our statement of belief made in an earlier chapter, namely, that an idea will be believed through the very act of having been conceived unless other ideas are present to contradict or conflict with it. How an idea is to be received, whether that idea appears in a dream or in some other way, depends upon the ideas, beliefs, and impressions entertained at the time. With different contexts different things may be appreciated and believed. Thus we may understand the differences in the belief of the child and the adult, of the intelligent and the simple-minded. The more limited the range of experience the more gullible and credulous an individual is apt to be. The child and the simpleminded adult are particularly credulous. Whatever comes to mind, whether it be a fairy story, a religious creed, or a political issue, is accepted unless there is something to deny it. Thus the lines along which our mental patterns have been organized must determine our allegiance, for the simple reason that acceptance or rejection is not conditioned by the exercise of some inherent or independent capacity, but depends upon the general set of concepts and relations of which it becomes a part.

In no cases are these facts any clearer than in the case of the mentally deranged, and in the case of individuals under the influence of drugs or alcohol. The delusions of the insane are accepted as real because they enter consciousness uninterrupted, the normally restricting patterns being removed by mental shock or physical injury. In like manner, a person in a state of drunkenness views the world with different standards of credibility, and may be led into saying and doing things which at any other time would be regarded as ridiculous. Delusions of all kinds, like misapprehensions of all kinds, are due to inadequate appreciation of the relations pertaining to the situation at hand.

SENSORY IMPRESSIONS DURING SLEEP

During sleep we do not hear, smell, or feel as we do while awake. This is not because the organs of sense are less acute, but because the impressions made on them are not registered, the normal release of nerve energy over sensory pathways being absent. However, if the impression or the stimulus is repeated, or if it is made sufficiently intense, it may break through and arouse the sleeper or become part of the dream content.

William James tells of a dream in which he seemed to be delivering a lecture before an apparently very attentive and complacent audience. Suddenly the audience arose and became very noisy, shouting, "Down! Down!" When he awoke he realized that what had seemed to him the cry of an angry audience was really the crowing of a rooster.

Another observer relates that, having occasion to apply a hot-water bottle to his feet when he went to bed, he dreamed that he was making a journey up Mount Etna and that the ground over which he passed was insufferably hot. On another occasion, a blister on top of his head made him dream that he was being scalped by a party of Indians.

Waking early one morning, and again falling into a light slumber, the writer dreamed he was in a church listening to an eloquent sermon on the Apocalypse and the Day of Judgment. The sermon was brought to an abrupt close when a sudden darkness closed in upon the building. This was followed by a violent explosion, a veritable "crack of doom," which caused everything to tremble and reel before the eyes. Here the emotional intensity of the experience became too great to keep consciousness below the waking level, and a second sharp bursting sound, following quickly upon the first, was recognized for what it really was, the bursting of a fire-cracker somewhere in the neighborhood. Similar to this was a dream in which the writer seemed to be fighting a forest fire. On waking he discovered that smoke from the remains of a smoldering bonfire had been floating in through an open window.

That sensory stimuli may in this way influence the dream content has received added confirmation from experimental sources. Reports agree that the distortions to which the impressions are thus subject are almost always in the direction of exaggeration. A tinkling sound may be apprehended as the voluminous chorus of ringing church bells. A light tickling of the sleeper's cheek may produce reflex movements to remove the stimulus, and cause him to dream of very distressing pain. A handkerchief drawn lightly over the face made one subject dream that a mask of tar was being applied in this manner. The reason for these exaggerations would seem to be that the stimulus enters consciousness alone, unattended and unchecked. This being the case it is not seen in its proper perspective. Nothing, for that matter, is ever properly apprehended or evaluated unless it is made to stand in its proper relation to pertinent values. This fact is as apparent in our waking life as it is in sleep. We are very much disposed to overestimate the importance of any object or situation if our attention is fixed upon it to the exclusion of everything else. Standing alone in consciousness its significance is apt to be magnified out of all proportion.

EMOTIONAL INFLUENCES DURING SLEEP

In earlier chapters attention was given to the profound influence which our emotional life may have on our mental life. We observed how emotional conditions and emotional appeals far outweigh all other conditions in their capacity to hold the attention and to direct the mental processes. This being the case we should expect to find the processes occurring in sleep quite as subject to these same influences. In this we are not far wrong, for one of the most obvious facts about dreams is the extent to which they center about matters emotional. Frequently a dream may be little more than a re-living of some exciting or unusual experience of the previous day. This recurrence or rehearsal is due to the same conditions which, during the day, provide for the persistence in consciousness of events with high emotional value.

To understand the tendency for emotional experiences to linger in consciousness and to reappear in dreams, we must turn to certain basic conditions of our physiological make-up, and particularly to the inertial and perseverative tendencies inherent in the nerve structures; that is, the tendency for nerve processes once in action to remain in action. Such perseveration is due chiefly to changes taking place in the nerve patterns themselves. Discharge within these serves to deepen the path, and tends to lower the resistance to further discharge. Particularly is this the case when the discharge occurs under the intensity of emotional stimulation. Predispositions are thus very apt to result from emotional experiences, since nerve energy release, whether in sleep or in waking, follows the paths of least resistance. On such grounds we may explain, not only the recurrence in sleep of emotionally toned experiences, but also the frequency with which some unusual or unaccustomed task will influence our dream content. Students undertaking strenuous or unfamiliar work during their vacation very often report troubled sleep and a tendency at first to dream about the experiences of the day. Similarly athletes before and after important contests may have their sleep disturbed by dreams of actual engagements.

There is no better illustration of the decided influence which emotional and organic conditions may have upon our dream life as well as our fully conscious life than that afforded by the observations of C. S. Finley upon patients whose conditions required glandular treatment.[1] This investigator found that glandular products normally secreted in the system under pleasant and euphoric conditions, would, when artificially injected, not only produce these conditions during the day but would influence the character of the dream. The same was found to be true for endocrine products secreted under other emotional states. When under treatment with pituitary extract the dreams of the patients were notably frequent and for the most part pleasurable. They felt buoyant and hopeful, and in their dreams attained easy realization of desired objectives. When, on the other hand, the condition of the patients required treatment with adrenal extract the affective value of the dream changed to one consistent with the type of emotion experienced under adrenal secretion. Frequently the dreams would be very terrifying. The patient would wake in a state of fear, trembling with excitement. Sometimes the strong emotional affect of these experiences would carry over into the day. With the cessation of glandular treatment dream life went back to normal.

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[1] FINLEY, C. S., "Endocrine Stimulation as Affecting Dream Content," *Arch. Neurology and Psychiatry*, Vol. 5, pp. 177–181, 1921.

Whether in sleep or in waking our mental processes follow the lines of least resistance, nerve energy being drawn off into patterns where the threshold or resistance is lowest. If it were not for this we could not explain how organic states, such as hunger or sex, are able to influence our mental reactions. Through their connection with particular brain areas, and through their capacity to lower the threshold within these, they are able to predispose our thoughts as well as our behavior. Thus it is that organic states of this type when present during sleep may influence the dream content, making the individual dream of the situations in which these states would be satisfied. Starving people are known to dream of wonderful feasts, and wanderers in the desert of cool fountains, of tables laden with luscious fruits and refreshing drinks. Sex dreams, resulting from internal and glandular secretions, are of a similar nature. It is upon dreams of this type in which wish-realizations are fairly obvious that the Freudians have based their whole theory.

Children's dreams, when not conditioned by fear or by digestive troubles, are very often wish-realizations. They dream of much desired objects, and of objects they have missed a great deal. Poor children dream of great stores of candy, of elegant toys, and of unending supplies of ice cream. The wish-fulfilling dreams of adults, when not influenced by organic states, are more apt to center about matters social and economic, about money, cars, jewelry, clothes, and other means of attaining prestige and independence.

But dreams are by no means always pleasant, nor are they very often of the wish-fulfilling type. Some investigators have maintained that unpleasant dreams are about twice as frequent as pleasant ones. This is not at all surprising when one considers the physiological conditions basic to the dream. For, certainly, unpleasant experiences leave just as deep an impression as any other experience. Moreover, the internal and organic conditions which frequently act as stimuli to the dream are usually of an unpleasant character. These conditions, digestive troubles and the like, leave the nerve centers in a state of subexcitation, and tend to establish a mental set or neural set favoring unpleasant reactions. They do this in much the same way as during the day they tend to make people cross and irritable. One psychologist remarked that he had no better indication of a disordered stomach than the tendency to rehearse in his dreams an experience which in his youth had been particularly disagreeable. Nightmares and other recurrent dreams are nearly always of this character.

During the war soldiers on the front were frequently harassed by dreams in which they re-lived battle scenes and episodes relating to actual engagements. Sometimes these dreams became so persistent that the soldier preferred to stay awake as long as possible rather than face the hideous specters of sleep. Long after leaving the trenches, when internal and organic conditions were favorable, and when chance stimuli and associations relating to these experiences happened to recur, these dreams would return with all the intensity of former days.

SOME TYPICAL DREAMS

Few dreams have aroused more speculative interest than the dreams of falling, soaring, and of levitation. Most people have had these dreams in one form or another. With some people it is the feeling of being suspended in midair, of descending gradually, or of falling more abruptly. With others it is more the feeling of rising, of soaring off smoothly, or of moving away in great swoops. There is some evidence, even in the content of the dream itself, that these experiences are closely linked with the sensory-motor functions of breathing. Repeatedly the writer has dreamed that through his own conscious effort, and by taking a very deep breath, he was able to lift himself up over the house tops, and to ascend and descend at will.

A generation or two ago when the theory of recapitulation was just getting under way, some of its devotees tried to find support for their theory in these dreams of falling and of levitation. The soaring and floating dream they believed to be a reverberation from the past when our piscian ancestors floated and swam through the water. The dream of falling was believed to be a heritage from our tree-dwelling ancestors whose experience of falling left so deep an impression as to be passed on with a tendency to reappear in dreams.

Much simpler is the explanation which relates these dreams to sensory and vasomotor conditions of the body and limbs. The flying dream with its apparent rise and fall is probably conditioned by respiration, the up and down soaring movement being due to the rise and fall of the chest in breathing. The feeling of suspension may be attributed to the absence or the gradual reduction of sensations from the skin and the muscles. This reduction in sensibility, due to fatigue and adaptation of the sense organs, is interpreted by the dreamer as absence of support or of solid contact, *i.e.*, suspension in the air. This is confirmed by the feeling of floating and of soaring which a patient may have when placed under an anæsthetic, or when cutaneous and bodily sensations are gradually removed through such treatment. Observations on sleeping subjects reveal frequent turning, such turning serving to renew sensibility in areas which have been numbed through constant pressure and through the shutting off of blood supply. No doubt it is when such turning does not take place, and when the sleeper is otherwise disposed to dream, that the feeling of zooming off into space becomes apparent. When in the dream of falling he would seem to hit bottom, it is probable that this feeling arises with the renewal of contact sensations in the moment of waking or in the act of turning.

Closely related to the dreams of falling and levitation are the dreams of obstruction, or the dreams in which the individual has a keen sense of futility and inadequacy. He experiences a feeling of heaviness about his limbs, a consciousness that his movements are slow and ineffective. If he would run his legs feel so heavy that he can barely move. Or if he would use his arms they sink leadenly to his side. There are several reasons for these feelings. Slowness and ineffectiveness are probably due to the absence of normal sensibility. Normally, our awareness of effective adjustment, as in running, is associated with decided sensations from the limbs, sensations which in the dream do not occur. The feeling of heaviness may be due to toxic conditions, not unlike those (consider colds, for example) which in the daytime arouse similar feelings. Then again the position of the limbs themselves during sleep may have something to do with it. A cramped and awkward position of an arm, or a leg entangled in the sheets, might readily influence the dream content. As for dreams in which no such difficulties are encountered, and in which adjustments are easy and efficient, it is likely that the bodily condition of the dreamer is more euphoric and less inclined toward depression.

Another dream which is fairly common, and which has been the subject of much comment, is the dream of nakedness. In this dream the individual may seem to be walking down the street when suddenly, much to his surprise, he finds himself parading in a state of nakedness. It would seem reasonable to suppose that this extraordinary situation develops at a moment when the bed clothes happen to slip off, and when, as a result, cold sensations from exposed portions become part of the dream content. The Freudians, however, would take exception to this interpretation. They are convinced that such dreams must be attributed to latent "exhibitionist" tendencies. There is, we are told, a fairly general desire to expose one's self, a desire which normally is held in check by social restrictions, but which may seek a substitute outlet in dreams. In support of their contention they refer to the "universal tendency of children to disrobe and to take unashamed delight in their nakedness." That women should have this dream more frequently than men is laid to a "more intense exhibitionist desire evidenced by their passion for the stage." We believe it would be more to the point to bear in mind the difference in training of men and women in matters of propriety as a potential influence in their dreams. Stricter training and a strong conformist tendency make women more fearful of incurring social displeasure and of overstepping socially accepted standards. Fear, then, rather than desire, may be back of the dream of nakedness, and may account for its more frequent occurrence among women than among men.

DREAM ILLUSIONS

Among the more remarkable of our dream illusions (all dreams are illusory to the extent that they seem real to the dreamer), one which is almost sure to be brought up in any discussion on dreams, is the possibility of time annihilation in the dream. It is a favorite concept that a very extensive period of time can be reduced to a single point, and that one may in a single instant pass through many experiences, see far distant places, and cover experiences which normally would require hours, days, and months. Certainly, in our dreams there may be a very rapid shift of scenes from places far distant to places near at hand, or from incidents in our childhood to those of later life. And, no doubt, the feeling of reality attaching to these remarkable shifts makes the individual feel that ordinary time values have been destroyed. But further we cannot go. All dream anecdotes to the contrary, we cannot believe that mental processes in sleep reach a higher speed than at other times. Yet this would have to be the case if the dreamer were able in his dream to pass through more experiences in a given length of time than it would be possible for him in imagination to pass through in the same length of time during his waking hours. Brain reactions, due to lowered tension, must be slower if anything during sleeping than waking.

Another interesting discrepancy of dream content is the tendency toward exaggeration, and the tendency for slight stimuli to assume huge proportions. A boy, who has a passion for marbles, tops, toy boats, skates, bats, or balls, realizes these beyond all measure. Frequently one dreams of finding a desired object, money, for instance. One happens first upon one coin, then another, and still another, until the ground seems literally strewn with coins of every denomination. Of a similar nature is the dream in which slight stimuli are greatly magnified. The sound of a single violin may gain the volume and variety of a great orchestra, the sounds blending harmoniously, or appearing rough and discordant, all according to the emotional state of the dreamer. The stimulus may sometimes be distorted as well as exaggerated. The buzzing of a fly may be apprehended as a roaring avalanche or a stormy cataract.

Upon waking we recognize these stimuli for what they are.

Correlates of this tendency toward repetition and exaggeration are to be found in other cases of low-level functioning, as in the behavior of the child and the feeble-minded adult, both of whom are known to delight in simple repetitive activity. The easy thing is always to allow an act once in progress to continue. To redirect the attention and to attain diversified perspective belong to higher level activity. The disposition of the dream toward exaggeration and repetition may therefore be regarded as only another example of this characteristic of low-level functioning.

It is a common contention that, due to the operation of a mysterious subconscious mind, some of our best poetry, some of our most profound ideas, and most extraordinary inventions have had their origin and have even been created during sleep. This we may regard as another dramatization closely linked with the dream illusion. It is not at all infrequent to dream of doing remarkable things, of making great discoveries, composing rare music, out-arguing some one on delicate points, or telling very funny jokes. But if we remember our dreams, we realize that our inventions are impracticable, our reasoning faulty, our jokes without point or significance. Yet the belief is widespread that individuals of special charm and talent, like artists and poets, get their best inspiration during sleep. It is possible that a novel idea may occur in a dream, but it is not very apt to be perfected or consummated in the dream. Quite another thing is the fact that, upon waking in the night, or in the early morning, when there are no other disturbing influences, and when the mind is free from the inhibitory influences of unrelated ideas conceived during the day, some of our finest mental work has been accomplished.

Closely related to the above is the fairly common belief that great artistic compositions have been conceived in a state of drunkenness. Poe's best works, for instance, are said to have been written in this condition. There is, we may say, much in the incoherent and distorted relations of drunkenness which bears a close similarity to the incongruities of dreams. But there is also in both cases an uncoupling of the mental processes and general disorganization of the higher centers, which should account for the irregularity of mental content. These unusual conditions, we allow, may provide for unusual connections and for the inception of novel ideas, but it is not very likely that these ideas are ever carried out in their significant relations either in the dream or in a state of inebriety.

CHAPTER XII

EMOTIONAL INFLUENCES IN HISTORY

A MAN who had the unique experience of being reared in the traditions and loyalties of three different countries provides us with the following interesting account:

> Being a subject of the English crown, and born under its sovereign rule, my earliest training was distinctly British and well adapted to the inculcation of the ideals, sentiments, and loyalties which are British. In this respect, the spirit of my training did not differ from that which might have been received in any other country.
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> At an early age I began to read history and to take an interest in the colorful heroes, warriors, and statesmen who had been the glory of England in the past. I was impressed with their courage, virtues, and insight, and, in recognition of their high ideals, came to regard it as a privilege to be a Britisher and to carry on in the spirit which had fired these early leaders. To the national flag, the Union Jack, I had given my allegiance with an inner conviction of the greatness which it symbolized. With swelling pride and rising emotion I had stood below its flowing colors and sung the national anthems of "God Save the King," and "Britannia Rules the Waves."
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> I was convinced then (and the idea still lingers) that Great Britain had contributed more toward the advancement of civilization and toward the realization of the ideals of Liberty and Democracy, basic to the social and political order of Western civilization, than any other nation.

But my education was not yet complete. Others were to convince me of *that*, when, at the age of fourteen, with my parents I moved to Denmark—there to find myself surrounded with the sentiments and loyalties of a new national life. This little country, hardly known to me before, was soon to loom large in the life of ancient and modern Europe. A new adjustment was required of me. With the people in whose midst I had been placed I felt called upon to give this new country a place of equal importance with that of England in the larger life of human and world affairs. I was to learn of new leaders and national heroes who had illumined the past and added glory and fame to their country. It was no longer Alfred the Great, Richard the Lion Hearted, or Sir Francis Drake I was to hear about. These heroic figures dropped into the background in preference to the stalwart King Canute, the farsighted Valdemar the Great, and the romantic Swain the Two-bearded.

All this came as something of a shock to me. I resented what seemed to me a tendency to exalt Denmark and the Scandinavian countries at the expense of England. Much of this point of view I was to get from a neighbor woman who seemed to harbor the suspicion that my education in some respects was distinctly lacking. It was with mixed feelings that I was to learn that "England's greatness was purely commercial, and that the domains of Danish rule might still have been as extensive as those of England's had Denmark been willing to colonize and to place or to hold other peoples in subjection." England's policies were berated as "policies of self-aggrandizement." The quality of her leaders and men of distinction was called into question. I began to doubt the praiseworthiness of Lord Nelson's ventures upon the seas in the interest of English supremacy, and wondered whether the hero of Trafalgar, whose stately monument I had admired in London, was so valiant a figure after all. I was inclined to think that the taking of the Danish fleet in 1807 was neither brave nor strategic. Perhaps the Danes were right in regarding it as a case of "outright theft."

But not until I entered the United States at the age of nineteen was I to learn of really great men, of a really great nation, or so, at least, it seemed, as I scanned anew the pages of history—this time, as seen by Americans. Everything else dropped into insignificance as I began to read about this new luminary in the society of nations. Here, in truth, were laid the foundations of freedom, liberty, and democracy. For it was here that the Pilgrim Fathers, in search of civil and religious freedom, had come to establish a new order freed from the tyranny and oppression of autocratic rule. The War of Independence, known to me before as a minor revolt of a few rebellious colonies, now became an event of the first magnitude. It was more than a struggle of a few scattered colonists seeking to free themselves from foreign oppression. It was a war which ushered in a new era, a war which furnished the stimulus for that wider movement in which men the world over dared to raise their voices in protest, and to die—if need be—in the cause of liberty and in the interest of that larger life which they believed to be the inalienable right of each individual.

But by this time I had ceased to accept nationalistic interpretations of world events at their face value. I was about convinced that such accounts, far from being the true record they professed to be, were highly dramatized and colored according to the prejudices and private ambitions of the particular nation sponsoring them. Facts were juggled to suit these special interests. They were distorted, sometimes to such an extent as to bear little or no relation to the actual events. Realizing how wide are these divergences one can hardly be blamed for losing faith in the veracity of most accounts presented and made available in history textbooks.

DRAMATIZING HISTORY IN THE INTEREST OF PATRIOTISM

That history has been one of the chief means of building up patriotic sentiment no one can doubt. Every country has considered it a right and a privilege to inculcate the spirit of loyalty and devotion, and to use history to the end that love of country and admiration for its ideals might be the possession of each individual. But, obviously, history cannot serve this purpose unless it is colored and dramatized by each country according to its special needs and interests. In other words, if we really believe that each country has a right to imbue the feelings, sentiments, and passions of patriotism, and a right to use history to that end, then we must also believe in a certain amount of reconstruction, if not falsification of historic fact, to make this possible. And yet, it hardly seems probable that responsible individuals, consciously and willingly, could be made to accept such misrepresentation as either ethical or legitimate.

One historian, who was interested in learning something about the consensus of opinion on this proposition, sent out a questionnaire to a group of his colleagues. From the answers it appeared that one or two were, indeed, of the opinion that utilization of history in the interest of patriotism was justifiable—that there could be no objection to substitution of myths for facts where such substitution might serve a useful purpose. They considered it legitimate to retain in our history texts the traditional stories which cluster about the personalities of Washington and Lincoln—deification of a few such men being deemed essential to our national life. They were convinced that, of all nations, the United States was justified in resorting to such measures because of the heterogeneity of its population. The strong emotional and imaginative appeal furnished by mythical and legendary accounts were necessary, they believed, to weld and to unify the diverse strains of our population. That ill effects might result from disillusionment, that the individual might lose faith entirely when he learned the truth—*the unheroic truth*—was not viewed by them as an imminent danger. Such ill effects, if they occurred, would be temporary, and, normally, the adjustment could be made without seriously disturbing the individual's love and affection for his country.

But most of those answering the questionnaire opposed the teaching of myths and legends as an expedient for inculcating loyalty and devotion to country. They were generally agreed that, as one put it, "our histories should be chronicles of fact," and that "we should teach the truth and not beautiful lies." "The story of this great nation," said another, "is sufficiently charming and heroic to require no further embellishment or fictitious enlargement. What every true citizen of this great land should want is the *truth*, the plain unvarnished truth."

This burst of idealistic sentiment stirs us sympathetically. To want the truth, all the truth, and nothing but the truth, is one of the ideals in which we have been reared. But *do we*, do these men really want *just* the truth? Do they believe that the child on the school bench should know, not only that the national heroes of their country were neither saints nor demigods, but that they were no more extraordinary than men in similar positions today, and that among them were stupid men, immoral men, and cowardly men? Along with the beautiful facts do they also want the ugly facts? Hardly. They might allow (the most liberal of them) that the child should be taught that there were two sides to the American Revolution, but would they tolerate the teacher or the textbook which did not give assurance that *the American side was right?* They might allow that myths and falsehoods should be excluded, but would they allow that *equal* weight should be given to the facts which appeal and the ones which do *not?* And yet, if we want the truth, the unvarnished truth, we cannot be content with anything less. Who would agree that a true picture of an athletic contest could be gained from an account which dwelt almost exclusively on the successful plays of one of the contestants? A one-sided account is a lie because it conveys a false impression. And every history teacher who consciously and knowingly presents such an account is lying. Truth or falsity is to be measured, not by the words that are used or the accuracy of the account as far as it goes, but whether or not we wish to convey a true conception. The only question which remains, then, is whether or not this form of lying, the form in which national histories indulge, is justifiable.

THE NEED FOR EDUCATIONAL DISARMAMENT

History, as taught by most countries, is a hopelessly garbled and one-sided affair, far removed from the exact science it professes to be. Every country on the face of the globe has used it as a means of glorifying its past and building a common tradition. It has been considered the natural medium through which love of country and national solidarity might be built up.

That history as taught in the schools should fall so far short of the scientific ideal is chiefly due to the nature of its content. Man's desires and emotions are too much involved to allow for an unbiased treatment. The facts with which history deals are too closely associated with national ideals and convictions to permit the impartial treatment accorded the facts belonging to other fields of scientific interest.

But the glamour of national history, with its deification and hero worship, while serving well to create love of country, has also proved powerful to inspire prejudice and hatred for other countries. In the process of defying national heroes and of elevating the national cause, it has been necessary to belittle the heroes and the cause of other nations.

The national history of any country is a drama, a drama in which that country is made to symbolize all that is good, noble, and heroic, while the countries with which it has been in conflict are accorded the reductive treatment appropriate to the forces of evil and iniquity. National histories war, one with the other. Being wars of the pen they look innocent, but, in reality, they pave the way for wars of the sword.

It is to fictions of this kind that we must lay the real cause of war, since they stir the passions and hatreds basic to war. In so doing they provide the groundwork requisite to war-time propaganda. Nationalist leaders have not been slow to recognize this. They have realized that, in the event of war, a strong emotional appeal is required to make men do and die. They have been aware that the ability to stir men's emotions and instincts, and to prepare them for the monstrous task of killing fellow mortals, depends upon the preparation made for it through earlier education. If from their childhood men had been inoculated with prejudicial accounts and made to believe that wars in the past have all been just and righteous wars, it will be easier to re-align their emotions and convictions in the interest of a new war.

Such educational propaganda, such technique and distortion of fact, is justifiable, however, only in the event that loyalty to country is the supreme loyalty. Should we, on the other hand, recognize loyalty to *Truth* and *Humanity* as above that of country, we should be forced to repudiate the methods and sentiments of nationalistic enterprise. If the welfare of humanity is above that of the individual and the group, it calls for our highest allegiance. If loyalty to truth is greater than loyalty to country we shall have to renounce the designs and tactics of educational propaganda.

What is more, if we are going to insist on the truth, not only as it concerns ourselves, but as it concerns other nations, we shall have greatly reduced if not eliminated the possibility of war. If in time of war the truth about opposing forces were to become a matter of consequence, if we were to have as genuine a concern for the pain, misery, and suffering in the enemy lines as for the suffering in our own, if stirring scenes of heroism and sacrifice in enemy trenches were to be as real as those in our own, we would not load a gun, we would not fight, and there would be no war.

HISTORICAL LEGENDS

Nowhere is there more direct evidence of the influence of emotional factors upon belief than in the case of myths and legends. The will to believe is apparent, not only in the way such stories get started, but in their perpetuation, and in the struggle which ensues when an attempt is made to uproot them.

So far as the public is concerned, it is merely that a story gets started, no one knows how exactly, and no one cares. Its accuracy is not a matter of great concern. In fact a strong suspicion may exist that it is a pure fabrication. The thing that matters is how the story strikes the public and whether or not it catches the popular imagination. Its ability to survive and to become a part of national and legendary history depends upon the strength of its appeal. The truth may become known, but when emotion is on the side of legend (and it usually is), legend is apt to win.

To attempt anything like a survey of the stories and dramatizations which have been woven into national and legendary history would be quite impossible. But for the purpose of analysis we shall consider a few examples. None perhaps could serve us better than the story of Joan of Arc, a story which represents one of the high points in nationalistic romance.

THE STORY OF JOAN OF ARC

Never before was drama written more effectively into the history of a country than in the story of Joan of Arc, Maid of Orleans and heroine of France. Never before did chance and circumstance so happily combine in the enactment of scenes so stirring, so thrilling, and again so tragic.

A shepherdess from Lorraine saves her country from the invading and beseiging English, only to be accused of sorcery, to burn at the stake and die a martyr's death.

Here again we have the evolution of a national drama. But this time the added features are less elaborate. The actual events out of which it is constructed are themselves highly dramatic. But fictive enlargement there has been, as in all such cases. With the circumstances surrounding the life of this heroic figure it could hardly have been otherwise. For here a thousand pens have been moved to write and retell the story, each adding its own bit of drama, its own bit of tragedy.

But here, as elsewhere, points of view and order of elaboration differ according to the interests and prejudices of the writer. To the English, who were defeated by her leadership, Joan was a sorceress. To the French, she was a God-sent deliverer. By her countrymen, she was blessed and later raised to the dignity of a saint. By the enemy, she was slandered and charged with lascivious conduct.

Naturally, much of the account on both sides is purely interpretive, and some of the events gain a very different complexion when these developmental features are laid aside. On the surface, of course, each incident is full of appeal. And many a boy and girl, moved by the colorful details, has dreamed of himself or herself in similar rôles, and wished, perhaps, that some day he too might hear "celestial voices" demanding his services in the interest of some great mission. Well, we can only hope that such revelations may not occur. For today when some one hears "voices" and sees "visions," instead of revering him as a saint and the recipient of divine communications, we believe him in need of institutional care. Joan, it would appear, was affected mentally by loneliness and other conditions while guarding her flocks, and as a result became afflicted with hallucinations of sight and hearing.

Even the normal phenomena of mental life are interpreted animistically if not spiritistically by most people. This being the case, it is not strange that disorders within this sphere should be similarly treated. We know that psychopathic patients are very apt to give a religious or spiritistic account of their mental aberrations. But views and assumptions of this kind have been most in evidence in times of widespread ignorance and superstition. And it was in such a day that Joan lived. Her education had been almost entirely limited to that received from the parish priest. With this background her own explanation of the voices was natural enough. As God had spoken to the prophets of old and delivered the Israelites out of bondage, so again He was revealing His will—this time to her. She was to be the deliverer of France. She was to drive back the enemy and see the Dauphin crowned.

That a simple peasant girl, contrary to previous habits and training, should unexpectedly lose her reserve in the presence of priest and nobleman, and with fearlessness and conviction demand that she be placed at the head of an army, can be understood only in terms of a strong delusional obsession. And that her claims to this special mission should have been accepted and have proved adequate to brace the spirits of a disrupted army, is intelligible only when we realize that it occurred in an age dominated by superstitions and by beliefs in magical powers, enchantment, witchcraft, and supernaturalism generally. That it was such an age became apparent in the trial for witchcraft to which Joan was subjected following her brilliant success. The precise nature of Joan's powers was the question at issue in this trial. Were they derived from God, or were they of the Devil?

As may be expected, the suggestion that Joan was insane does not find favor with those who have worshipped her as a heroine and a saint. The objection raised has been that Joan's mind must, at least in the main, have been intact. But this does not rule out the possibility of insanity since the absence of any general disorder is characteristic of paranoia, the psychosis with which Joan seems to have been afflicted. There is evidence of paranoia in her hallucinations; in her steadfast assurance of the reality of her imagery; in her delusion that she had been ordained by God to save France; and, finally, in the absence of other signs of mental deterioration. These symptoms are all typical of this particular form of insanity.

In the reconstruction of the story, the admirers of Joan, consciously or otherwise, have worked out a parallel between the life of their heroine and that of Jesus. We are told that the "coming of Joan" like that of Jesus had been prophesied. A seer, Madame d'Avignon, is credited with having foretold Joan's mission in the oracular statement that "as France had been ruined by a woman, so would she be saved by a woman." Like Jesus, Joan was convinced of a divine mission, that she had been called by God to save a people. And again, like the Christ, she was placed on trial following the completion of her task. She was found guilty, disowned by her own people, and died a martyr's death. Writers have tried still further to impress the inspired quality of Joan's personality by couching her reputed sayings in the language of the Bible.

Joan's success appears most extraordinary. She leads the French against the besiegers at Orleans and without much difficulty forces the English to withdraw. Troyes surrenders without a fight. The English leaders are bewildered. They find their army all but demoralized, while the enemy forces, from being an army of laggards and pillagers, are suddenly inspired with new confidence and are pressing on with zealous enthusiasm. In less than four months all is won and Joan returns to fulfill the second part of her mission, the crowning of the Dauphin Charles at Rheims.

How shall we understand these unusual developments? To many, and particularly to the French, they are perforce supernatural, miraculous. God intervened. He revealed Himself to a simple peasant girl, using her as His instrument in saving France.

But there is another explanation which is simpler. The French had lost all hope and were in need of a new and powerful stimulus to stir them from their despair and depression. To this end, Joan, with the steadfastness of her delusional system, proved herself very efficient. With the aid of prevailing superstitions she stirred new hope and roused the dispirited soldiers to renewed effort.

The secret of her success was not due to some strange magic, but to her fearlessness, the fearlessness of an obsession, and to her own confidence in her mission, a confidence adequate to secure a following in a moment of dire need. The new courage which she managed to instill in the French came at a time when the besiegers were already growing weary and restless. Added to this was a superstitious confidence on the one side and a superstitious terror on the other. For even the English were convinced that something very sinister was in progress, and that in the personage of this girl, proceeding under a strange banner, they were no longer dealing with a mere mortal.

While assisting in the defense of Compiegne she was taken prisoner by the Burgundians. The Duke of Burgundy sold her to the English, and they in turn delivered her to the Church to be tried for witchcraft. The Church required that she disavow her visions and revelations or burn at the stake. She refused to submit the matter to the authority of the Church, since for her there was no authority save that of her voices. This the Church could not recognize without renouncing her dogma. The Church was supreme, and only those properly ordained could receive messages direct from heaven. Accordingly, if she had heard voices they must have been those of the Devil. For her opposition to the Church and for her insistent claims she was found guilty of heresy. On May 30, 1431, she was burned.

But the beliefs and decisions of men are apt to change from time to time according to their special interest and prejudice, even the beliefs and decisions of the Church. Realizing the place Joan was destined to have in the hearts of her countrymen, those who had condemned her withdrew their charge. This withdrawal occurred in 1456 when the papacy was in need of money and support for her crusade. To have the charge revoked would win the people of France and would please the king who did not want to have it said that a sorceress had led him to his coronation. The pope absolved her on the supposition that she had really not understood what she was doing when she refused to recognize the authority of the Church. "The questions put to her were too difficult," said Frere Martin Ladenau, "for she was a poor woman, rather simple, who scarcely knew the Pater Noster and the Ave Maria." She was beatified in 1909 by Pius X, and canonized in 1920.

What, then, are we to make of this story? What are we to make of the contradictory views of the French and the English as to the character of Joan and the source of her power? What shall we say as to the possibility of divine revelation and supernatural intervention? Our best answer is that emotional factors, if ever, were at work in this national drama, first in shaping the events and happenings themselves, and later in the reconstruction of these events at the hands of biographers and historians. Emotions decided for the English that Joan was a wicked and sinister creature, and for the French that she was the divinely inspired agent of the Almighty. Desire and prejudice have moved poets and historians to insist on a mystic interpretation of all that befell their heroine. These same prejudices have opposed every attempt to give a naturalistic interpretation of the unusual circumstances surrounding her life. Lovers of the poetic and the mysterious have found in the story a wonderful triumph of mysticism. They have insisted that Joan's "voices" were not hallucinatory but true revelations, and that her exceeding confidence and persistence were not psychotic but divinely inspired. Surely, man's passional nature never furnished a clearer example of *the will to believe.*

Emotional influences are no less in evidence in the events themselves. Powerful emotions gave to Joan her fearlessness and implacability in the pursuit of her mission. They renewed the courage of a faltering and wavering army, bracing the disheartened soldiers and rousing them to such ardor and enthusiasm that all opposition withered before their advance. Strong emotions of fear and awe stirred the enemy forces at the unexpected sight of a maiden in armor moving forward under a mysterious banner and surrounded by a frenzied multitude.

It was with the aid of superstitious fears and strong emotions that Joan of Arc rode to her victory; and it was under similar influences that she was, a little later, to meet her death, when zealous priests, blinded by ignorance and superstition, charged her with heresy and demanded that she pay the severe penalty. When a new set of interests and desires moved the priesthood they withdrew the charge. The same emotions which in one day condemned Joan as a sorceress and a heretic, in another invested her with a halo of saintliness.

WASHINGTON AND LINCOLN STORIES

With advancing culture and civilization people become more critical and less credulous. This is reflected in historical accounts which become freer from narratives and exaggerations as we approach modern times. Our own national history may, for this very reason, be much less burdened with myths and legends than other histories. But myths there are, one or two of which we shall note. These relate to the lives of Washington and Lincoln, our two foremost national heroes.

The best-known Washington story is the one about the hatchet and the cherry tree, in which the "Father Of Our Country," when confronted with his misdeed, is reputed to have said, "I cannot tell a lie, I did it with my little hatchet." This tale was related as history shortly after Washington's death. Since then it has been recited to every Sunday School class, and to every generation of school children, as a most worthy example of truthfulness. The story has been traced to Washington's popular biographer, Parson Weems, a man noted for his anecdotes and lack of sincerity. Weems had put the incident on record as historic fact, although, as he later admitted, the story had come to him only by hearsay.

The most colorful legend connected with Lincoln's life is probably his dramatic intervention between the firing squad and a doomed soldier, William Scott. The facts connected with the incident, as recently disclosed,[1] seem to have been as follows: On the night of August 30, 1861, Scott with two other men were set to guard the Chain Bridge which crossed the Potomac a few miles from Washington. The officer of the guard, when making his round that night, found Scott asleep at his post, an offense for which the penalty (in time of war) is death. A court-martial was called and Scott was found guilty. He was sentenced to be shot at sunrise, September 9. The day before the execution a petition, signed by a number of officers and comrades, was sent to Brigadier General Smith requesting that Scott's life be spared. Smith complied with the request and ordered General McClellan to issue the pardon, and to have it read before Scott's regiment on the morning when the sentence was to have taken place.

It appears that the military authorities had not contemplated any actual execution, and that they had merely desired to throw a good scare into the soldiers. Lincoln had not actually been involved. He had heard of the sentence, and, in turn, of the pardon, but nothing more.

The pardoning of a soldier with the knowledge of the president were the nuclear events out of which the

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[1] For the facts in this case the writer is chiefly indebted to the research of W. E. Barton and to his "Life of Lincoln," The Bobbs-Merrill Company, 1925.

Lincoln drama grew: Harsh generals in the order of their duty had doomed a poor boy to die—it was not for them to show leniency or mercy—*that* was to be the task of a great national hero, a lover of the people, who, in the nick of time, was to hear of the tragic event and come galloping to the rescue—movie fashion—to step between the prisoner and the firing squad.

It is in this form that the story has come down to us, thanks to the cooperation of news writers, poets, and mythmakers. The actual facts have been known for some time. But it is not the facts which matter in situations of this kind. Rather than accept the simple truth that the officers themselves had been just and humane, and had issued the pardon without outside help or urging, the public preferred the romantic tale so handsomely depicted by poets and historians. It never seems to have occurred to those sponsoring the tale that Lincoln had enough to do with his own affairs, and that it would have been a grave error for him to act over the heads of the military authorities.

THE POCAHONTAS MYTH

One of the most engaging stories known to the American schoolchild is the one which relates the adventures of Captain John Smith and his rescue by Pocahontas, daughter of the Indian chieftain, Powhatan. The events of this story are important in the history of Virginia and in the founding of the Jamestown Colony. Two accounts of the story have been handed down to us. Both were written by Smith himself, the one in 1609, the year following the incident, the other some fifteen years later. The two differ considerably in their details.

The first probably represents the actual facts in the case. It is found in Smith's "*True Relations*." The second is a much more colorful affair and has all the trimmings and embroidery which become a part of such stories with frequent retelling.

According to the "*True Relations*" narrative, Smith and his party, while on a hunting expedition, were overtaken by Indians. All were killed except Smith, who was taken prisoner and brought before the Indian Chieftain, Powhatan. Smith was greatly impressed with the splendor and surroundings of this savage monarch, whom he found "lying on a bedstead a foot high, upon ten or twelve Mattes, richly hung with manie Chaynes of great Pearles about his neck . . . at his head sat a woman, at his feet another . . . " The interview in the main seems to have been uneventful. His treatment was cordial, and after a while he was sent on his way with four men to act as guards.

The second narrative, contained in Smith's "General History of Virginia," presents a very different story. The encounter of Smith and his party with the Indians is very much the same as in the earlier narrative. But from here on the two accounts diverge. Smith is captured but is not immediately taken to Powhatan. He finds his life in constant danger, and resorts to various devices to save himself. Among other things, he tries to bewilder the Indians and "to confound them with a display of superior knowledge." In this he is successful with the result that he is paraded about the country as a wonder. The climax of the story is reached when he is finally brought to Powhatan. Concerning his reception we read:

> Having feasted him after their barbarous manner, a long consultation was held, with the conclusion that two great stones were brought before Powhatan; then as many as could laid hands on Smith, dragged him to them, and thereon laid his head. And, being ready with their clubs to beat out his brains, Pocahontas, the king's dearest daughter, when no entreaty would prevail, got his head in her arms and laid her own on his to save him from death. Whereat the Emperor was contented that Smith should live, to make him hatchets, and her bells, beads and copper; for they thought him as skilled in all occupations as themselves.

It is this specious account which has been written into history. The truth of it was never doubted until, in 1859, Dr. Charles Deane pointed out its inconsistencies, and that the earlier narrative contained no reference to Smith's display as a marvel, nor to any hairbreadth escape during the interview with Powhatan. Since then other investigators have been convinced that these features were fictitious, and that they represent the typical story in evolution. The attempt to replace Smith's drama of later life with his earlier record has been hotly contested, however, not only by the public but by historians. One writer complains that "if history is to be shorn of all these incidents which add beauty to our national life, it will soon become a very drab affair," and adds that "next thing these self-styled myth exploders will be telling us that American history *is*, in fact, a colorless and drab affair."

It would be difficult to find a better example of the manner in which emotional factors influence and mold national records. In this instance, the facts obviously favor the adoption of the earlier record. But it is rejected, for no other reason, apparently, than its lack of emotional appeal. Historians have tried to rationalize the situation on the ridiculous assumption that Smith falsified his first account, but that in the elaborate story of his later years he told the truth. Even the otherwise sober article on Captain John Smith in the Encyclopædia Britannica defends the authenticity of the later narrative. Had Pocahontas been at all involved, and had she been as important a figure in Smith's release as this story indicates, she would surely have come in for mention in the earlier account. During the intervening years Pocahontas had become a national figure. Her marriage to a prosperous Virginia planter, together with a number of other romantic incidents, had given her a place of special significance in popular imagination. Stories had been circulated about her wild beauty, her bravery, and her partiality to the whites. Without a doubt, it was these circumstances which decided for Smith that the Princess should play a part in his later drama.

CHAPTER XIII

EMOTIONS IN POLITICS

MOST PEOPLE THINK WITH THEIR FEELINGS

To ask himself how he *feels* about this, that, and the other seems to be the only natural way of settling questions so far as the average individual is concerned. Particularly is this true when the questions are of a moral, religious, or political nature. He finds thinking too troublesome. Interrogating the feelings is much simpler. Reasons and arguments may do very well in supporting a position, but not in deciding it. In his feelings he finds something subtle and unfathomable. Are they not, after all, the source and fountain of intuition?

Upon his feelings the average individual is willing to stake a good deal. That he *feels* a particular way about some national policy, about prohibition, about world disarmament, about supernatural forces, or about immortality, is sufficient to warrant belief in any or all of these. If his viscera respond profoundly and expansively to the suggestion of world-wide prohibition, and world-wide disarmament, then these must be things to be supported. "The yearning of his bowels for his dear ones," says James, "is the surest warrant of immortality." And "the sinking sense it gives to imagine no Providence" is the surest indication that God exists. Whatever moves us with fervor and ecstasy, carries us off our feet, must be real, must be true. One cannot feel *that* way about something which is false. It is out of such feelings and such experiences that beliefs in revelation and in mysticism have arisen. The reason for the beliefs in each case is the inner yearnings and bodily commotions which these situations arouse in the individual.

CONCEIVING IN PASSION AND ACTING ON IMPULSE

William James quotes the following passage from Bagehot:

> The Caliph Omar burnt the Alexandrian Library with the words: "All books which contain what is not in the Koran are dangerous. All which contain what is in it are useless!" Probably no one ever had an intenser belief in anything than Omar had in this. Yet it is impossible to conceive it preceded by argument. His belief in Mohammed, in the Koran, and in the sufficiency of the Koran, probably came to him in spontaneous rushes of emotion; there may have been little vestiges of argument floating here and there, but they did not justify the strength of the emotion, still less did they create it, and hardly ever excused it . . . Probably, when the subject is thoroughly examined, conviction will be found to be one of the intensest of human emotions, and one most closely connected with the bodily state . . . A hot flash seems to burn across the brain. Men in these intense states of mind have altered all history, changed for better or worse the creed of myriads, and desolated or redeemed provinces or ages. Nor is this intensity a sign of truth, for it is precisely strongest on those points on which men differ from each other. John Knox felt it in his anti-Catholicism; Ignatius Loyola in his anti-Protestantism; and both, I suppose, felt it as much as it is possible to feel it.[1]

[1] JAMES, WILLIAM, "Psychology," Vol. II, p. 308, Henry Holt & Co., 1907.

OUR FEELINGS AND OUR SENSE OF REALITY

Things seem real and important in the same measure as they excite us, move us, stir us. In the midst of an exciting game or contest, it is that game and its object which is real, and nothing in all the world matters more than its outcome. An hour or two later, possessed of new interests, all is different. That the value and importance of a given object should change from time to time can be understood only in terms of the emotional changes effected through shifts in interest, and shifts in attention. A particular moral or religious issue comes "home" to us with poignant effect, or fades into insignificance, all depending upon how we feel, our mood, and our mental and emotional setting.

Nothing is valued except as its satisfies a desire and is able to stir us emotionally. Where values are relatively constant, emotional quality must be just as constant. Under unexpected emotional changes, however, this equilibrium may be upset with the result that momentarily distortions in perspective and changes in feeling of reality become manifest. This is why we sometimes do such strange things under the influence of strong emotion. A mere word, a reproach, or an insult may lead us into precipitous and unexpected forms of behavior. At the moment, the object of affront looms before us as the only menacing and challenging thing in all existence. An object of desire may stir us just as powerfully, and, again, may lead us into just as unexpected forms of behavior.

Our changing feelings as to the importance of things depending upon mental and emotional shifts is well known to the salesman. We have all had reason to wonder—after getting home with our purchase—what could have possessed us when we made the purchase. We may have had recollections of a salesman pressing his advantage after getting us to think about the value of the object. We may have remembered that, while engrossed in the fine points and usefulness of the article, there had been no uncertainty in our minds as to its value. The salesman knows that frequently the customer must be brought to a decision then and there if there is to be a purchase, and that the chances for a sale are always greatly reduced through the opportunity "to think it over."

GETTING RESULTS IN POLITICS

If most people think with their feelings, and act and believe according to the way they feel, then the way to get results must be by working on these affective states. No one knows this better than the clever and astute politician. In seeking to control belief and action he does not put much faith in the rational type of appeal. He knows that it is sentiment that counts, that men are controlled more by endocrine secretions than by intellect, and that if they are to be convinced they must be convinced emotionally.

The platform orator is aware that the important thing in winning his audience is to make them *feel* with him. Having won them thus he can be reasonably sure that they will *stand* with him on almost any issue. This is why he so often becomes the showman, cajoling his audience, amusing them, flattering them. Through his horseplay and buffoonery he gets them into a receptive frame of mind. Having made them laugh once it is easier to make them laugh again, the next time at the caricatures of his political adversaries. People like to laugh, particularly at someone else. It gives them such a delightful feeling of their own superiority. *But they don't want to be laughed at.* Thus, ridicule may prove a very subtle form of argument, since it decides for the audience which side they are going to be on, which is exactly what the politician wants.

But the humorous appeal, while effective, is much more so when coupled with something more serious. A touch of melodrama always seems to be in order. The speaker may effect this by a change in air, by vindictive sallies against injustice and corruption, or by posing as the champion of the Constitution and the defender of sacred rights. Or he may indulge in a patriotic appeal emphasizing all the rights and privileges associated with our national existence. The politician is always a patriot, always a lover of the Constitution, always a defender of the Bible, and of anything else that touches the emotional life of his audience. It is these facts, among others, which are stressed by Kent in his recent and very able book, "Political Behavior."

But when it comes to getting results, getting action, and action the politician must have, the strongest appeal is certainly neither the humorous nor the dramatic. A glance at the methods which get results in time of war will convince us of this. And at such a time, if any, a powerful appeal is necessary or men would not engage in the most barbarous of all activities. It is in the appeal to men's aversions and hatreds that the political campaigner, as the war propagandist, finds his most effective instrument. There is nothing to which men respond more quickly, more instinctively, than to the suggestion that their special rights are being interfered with,—nothing which stirs them more violently than the belief that some nation, some group, or some party is challenging their freedom, infringing upon their liberties, cheating them, defrauding them.

It is for this reason that it is easier to organize a campaign *against* than a campaign *for;* easier to rouse men to opposition than to cooperation; easier to move them destructively than constructively. The appeal to cooperation in the interest of some great and common good will leave men cold when the suggestion of opposition or of interference with selfish interests may have an incendiary effect.

It is because we are inherently selfish that the idea of opposition and of interference with personal rights is so powerful to move us. It is for the same reason that we are more interested in guarding what we have than in making further acquisitions. The way in which the child's interest in his toys is suddenly revived when some other child wants them shows this most clearly. And what is true of the child in this respect is equally true of the adult.

It is because our preferred ways of thinking about our own kind inclines so much toward the ideal that this crass picture of the circumstances which actually move men is anything but attractive. But such, indeed, is the ordinary human clay, and such are the tools with which it may be fashioned. The intelligent few, it is true, may prove less susceptible to these lower types of influence and appeal. But it is not they but the unintelligent many with whom the campaigner and platform orator have to deal. And so far as the great majority are concerned purely rational influences are all but negligible.

THE POWER OF WORDS, GESTURES, AND SYMBOLS

For the public speaker the thing that matters is not so much what he says but *how he says it.* This is well illustrated in the case of the woman who apparently had been moved ecstatically by her minister. Clasping her hands she began to extol his virtues and to exclaim about the *won-der-ful* sermon he had delivered. When questioned, however, as to just *what* it was she had found so wonderful, she said, "Oh it is really so hard to say (pause) but I did love the way he said *Mes-o-po-tá-mi-a!*"

Like songs and hymns, public speeches must sound well. Whether they mean anything or not is of secondary importance. The audience is not there to be instructed but to be entertained, to be appealed to. The greatest error into which any public speaker can be led is the supposition that his auditors are at all interested in anything requiring mental effort. The bulk of humanity must be reached through their emotions. It is the only way they *can* be reached. Of course, it may be well to make a pretense of appealing to reason, and to give the audience the illusion of being intelligent, but it will never do to proceed on that basis.

Some years ago, the writer, while taking a course in English, was assigned the task of outlining and reporting upon an address to be delivered in a neighboring town by a noted political campaigner. Equipped with pad and pencil and full of expectations he arrived on the scene. But when the speech was over nothing had been recorded except the alleged topic of the speaker. He was amazed that any one could say so much, or *appear* to say so much, without actually saying anything. And yet, the applause and enthusiasm, not to say hysteria, of that great assemblage was one of the most impressive public exhibitions he had ever witnessed. There was, indeed, something striking about the speaker. But this was mainly in his voice and general appearance. He had stage presence, knew how to act, and had a remarkable gift for telling stories, acting out his parts and stirring his audience first to laughter and then to pathos. He knew how to be serious and, at times, seemingly profound. When making his "points" he would do so with great gusto, stringing his resonant and well-rounded phrases, and closing his appeal with one grand burst of oratory, his arms outflung, limbs taut, and head thrown back. A roar of applause followed, the band struck up, and the crowd went crazy. His presentation was anything but coherent. In fact there was no attempt at definite sequence. Outside his stories and episodes it was merely a series of emotional gestures and appeals. In the midst of his presentation he would seize the Bible, hold it aloft, and, without further reference or bearing, declare with profound emphasis that truth *must* and *will* conquer. Or he would snatch a flag from the platform, crush it to his bosom, and with solemn air plead for the support of "the greatest issue in the history of the country."

THINGS AS WE PICTURE THEM AND THINGS AS THEY ARE

There is a good deal of difference between the way we picture things and the way they really are. Our picture of a thing is frequently a reconstruction of the actual. It is a dramatized product fashioned to suit our emotional needs. In fact, it frequently is not the actual we want, we want fiction; and fiction we get from all those agencies and organizations interested in shaping our beliefs and controlling our actions.

No public personage, no one whose livelihood depends on the interests of the public can afford to ignore the special demands and ideals of the public. The politician, the minister, the artist, the orator, the pugilist, all alike must take account of popular concepts and popular demands. The artist knows that in order to impress his audience he must conform to the popular ideal. He must appear temperamental and erratic. If a poet or painter, he must realize the value of being a nonconformist in dress and manner; if a musician, the value of wearing his hair long, or of changing his name to something that sounds Russian. A movie actress achieves a name for herself as much through her divorces, her romantic and temperamental sprees, and her "nervous breakdowns," as through her acting before the camera.

But in no case are the special demands and ideals of the public more religiously observed than in the field of politics. The campaign speeches and publicity stunts which precede elections are all designed to catch the popular imagination and to create an atmosphere about the candidate favorable to his election. It was for no other purpose that Coolidge during the 1924 campaign arrayed himself in overalls and pitched hay before the movie machine, and was photographed carrying an old sap bucket and doing odd jobs about the farm. This gave to Coolidge the background and the setting which accorded with the popular and traditional concept of an ideal president: a man like Lincoln, a lover of the common people and of simple ways, a man born in a log cabin and reared in the wholesome atmosphere of the countryside.

The influence of ideal and one-sided concepts is as apparent where groups and parties are concerned as where we are dealing with particular individuals. The strife between groups as between nations typically results from false conceptions and from an insistence upon the reality of the picture each has of the other. There would be no clash in politics and no furies of war if it were not for the sincere belief of the participants in the reality of *their picture of the opposition.* Republicans might think better of Democrats, and Democrats better of Republicans, if each could have their one-sided views replaced by something less partial. It might be all right to see ourselves as others see us, provided we realize that what we see is, more than likely, a caricature.

THE IDEAL AND THE ACTUAL IN DECIDING THE VOTE

It would be difficult to find a better example of the ideal conception as to how votes are determined than that expressed in the following lines from a famous campaign speech: "It is not here, my friends, that the destiny of this great nation is to be decided, but by a million firesides where each and every voter with his wife and children around him in prayer and meditation consults his God and his conscience as to the essential justice of this great issue." All very fine, all very excellent. But if the facts were known would it be this picture we would see? Or would it be the picture of a tired voter coming home from his day of toil to read his partisan newspaper, and through its one-sided views becoming convinced as to which way he should vote?

Being a democracy, and believing in the ideals of the democratic state, we are convinced that all should have the right to vote. Having accepted this ideal we further assert, or at least hope, that each one in exercising this power will come by his decisions rationally. No one in accepting the ideal of democracy is at all anxious to face the fact that by giving the masses the right to vote (emotionally we are unable to countenance any other alternative) we have placed the real decisions in the hands of a few politicians and leaders who swing the votes of the masses. Ideally, we may believe and hope that each man in making such important decisions will not do so without first considering all the facts in the case. Actually, we should know that very few bother to get all the facts before they decide, and that their decisions, instead of being arrived at through certain knowledge, are the results of the pictures in their minds, pictures created almost entirely by partisan information. If we do not believe this, we need only to observe how few homes keep both Republican and Democratic papers, and how few people during election will read the accounts of both parties as presented by both parties.

Democracy, it would seem, defeats its own purpose. Instead of distributing power and placing it in the hands of the many, it concentrates it in the hands of the few. It places the real power to nominate and to elect in the hands of a few political and industrial leaders who, with their vast monetary resources, support the political machine. No one is ever elected on the grounds which are upheld as ideal. To be elected the candidate must first and foremost have the support of those who control the nomination and who swing the vote.

WOULD ADHERENCE TO THE RATIONAL IDEAL BE A GOOD THING?

We are told that we should be rational, that we should avoid emotional and non-rational influences in forming our decisions and in determining our affiliations. Rational and discursive methods are upheld as ideal not only in politics, but in morals, and even in religion. It might be well before bringing to a close our discussion on emotional influences in the sphere of thought and belief to examine this ideal more closely and inquire into its practicability.

That we do uphold the ideal of strict rationality is apparent from such selections as the following, taken from Clifford's discussions on belief:

> Belief is desecrated when given to unproved and unquestioned statements for the private pleasure of the believer . . . Whoso would deserve well of his fellows in this matter will guard the purity of his belief with a very fanaticism of jealous care, lest at any time it should rest on an unworthy object, and catch a stain which can never be wiped away . . . If a belief has been accepted on insufficient evidence the pleasure is a stolen one . . . It is sinful because it is stolen in defiance of our duty to mankind. That duty is to guard ourselves from such beliefs as from a pestilence which may shortly master our own body and then spread to the rest of the town . . . It is wrong always, everywhere, and for any one, to believe anything upon insufficient evidence.[1]

Well, if it is "sinful" to accept or believe on "insufficient evidence" then we must all be pretty sinful. For, surely, most of our social, moral, political, and religious beliefs are accepted and adhered to without anything like "sufficient evidence."

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[1] Quoted by James, "Will to Believe," p. 8, Longmans, Green & Co., 1917.

We are Christians rather than Buddhists on insufficient evidence. We are Protestants rather than Catholics, drys rather than wets, Republicans rather than Democrats, for reasons that are all of a non-rational character——emotion, teaching, training, and circumstance being the chief determinants.

It is one thing to affirm the rational ideal, quite another to put it into effect. We may, as Clifford, passionately declare its virtues, and yet find on closer examination that it is an entirely impracticable concept. Indeed, it would not require very close inspection to realize that *the very existence of our social and political order depends on a good deal of unquestioning acceptance;* at least, so far as majority opinion and belief are concerned.

What would become of our moral institutions, our political institutions, our social and religious organizations, if we should not only admonish people to be rational in all their decisions, in all their affiliations, but also permit them to abide by their decisions, whatever they might be? And there could be no point in advising that they make their decisions and determine their allegiance on purely rational grounds if we would not allow them the privilege of abiding by these decisions.

If men were not willing to be herded, to be labeled, and to take their opinions ready made from those in authority, the very foundations of organization, and of law and order would be gone. *We can stand to have a few Borahs, a few independent thinkers, but we could not stand to have everyone turn into Borahs.*

Could a nation tolerate individuals who, for instance, in contemplating the right to wage war, decided in the negative, and, for that reason, refused to lend their support to this form of national enterprise? And what would become of our morals? What if an individual decided against the marriage institution, the right of the state to settle disputes between individuals, or the sacredness of certain religious concepts? Such individuals are not considered ideal even though their attitudes are achieved through ideal and socially approved methods. No, they are anarchists, heretics, bolshevists. This is only another example of the contradictions harbored by the human mind, contradictions which arise out of the discrepancies between the ideal and the actual. It is all right to be rational so long as our discursive processes lead us to conclusions already accepted.

Wells writes,

> Morality as a private and individual matter is all but synonymous with anarchy; it might lead to as many religions as there are persons concerned. Most persons prefer to follow leadership in moral affairs as well as in industrial or military ones. A person answerable only to himself has a very different code of morals according to the state of his business, to what he ate for dinner, to the condition of his endocrine glands. It has been said that the most elastic substances are helium, hydrogen, and the human conscience. All human societies have needed a morality made uniform by law and religion; by religion with authority ascribed to the supernatural, by law with authority derived from the worldly custom of the group.[1]

What, then, shall we conclude? This, that not only are our beliefs and our attitudes non-rationally and emotionally determined but *they must be so* in order that group life may be made possible. The very existence of a social and political order presupposes a good deal of non-rational determination and unquestioning acceptance so far as majority opinion and belief are concerned. The principles of acceptance and of rejection, like those of law and organization must come from above and not from below, must be inculcated from above and accepted by those below, must be conceived by leaders and adhered to by the masses, or the very foundations of society are gone.

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[1] WELLS, F. L., "Pleasure and Behavior," p. 143, D. Appleton and Company, 1924.

CHAPTER XIV

CONCLUSION—EMOTIONS AND VALUES

In preceding chapters we have repeatedly had occasion to notice the close connection between the problem of motive and the problem of values. The reason for this close connection is apparent when we realize that values cannot exist as something external or independent, but must depend upon interest and upon need. Of indifferent value must be anything and everything which is without emotional appeal, and which does not satisfy some natural demand. Thus, the attraction-quality of an object or situation, and the feeling that it has value, would seem to be entirely dependent upon individual and organic needs, the satisfaction of which is not rational but emotional.

All values, we believe, whether mental, moral, or æsthetic, may be traced to a constitutional basis. To trace them to such a basis is in keeping with more recent findings of the social and biological sciences. Indeed it is the rapid development within these fields which is responsible for the far-reaching changes now occurring in the spheres of morals and belief, as well as in the generally accepted views of the universe and man's place within it. Traditional standards and sanctions are giving way to attitudes based upon experience and natural law. This is, of course, not without its dangers. Certain writers—John Dewey, Bertrand Russell, Walter Lippmann, Harry Emerson Fosdick, A. S. Eddington, A. N. Whitehead, and others—alert to these changes, are fearful lest the transition be too rapid and the individual be left without a point of reference and without a guide for conduct. Walter Lippmann, in his recent book, "A Preface To Morals," feels that the youth of today have been cast adrift. With the discrediting of the old sanctions of morality and belief many are failing to see that there is anything that really matters. With their new-found freedom, and with the realization that morals and values are not immortal essences but man-made, they are beginning to wonder whether doing one thing is any more worth while than doing another, or than doing nothing at all. Having lost the certainty that their lives are significant, they feel, as Lippmann puts it, a great vacancy, a great emptiness.

Now, whether this state of mind is representative or not, there can be no doubt but that we are entering upon a new period, and that, with the new knowledge gained from the social and biological sciences, there is need for a reconsideration of the whole problem of morals and values. For this reason, in our restatement of the point of view adopted in this book, we should like also to consider some of its implications for the larger problems and for a philosophy of life.

WHAT IS IMPORTANT?

Is there anything that is important, that really matters? If there is, or if we feel that there is, it is only because we are constituted as we are. Or so, at least, we shall be obliged to answer if we are to be consistent with previous analysis and discussion. Were we differently constituted, had we different desires, other things would seem important. Had we no desires or cravings, nothing would be important. Life gains its significance and value only from the existence of need, the satisfaction of which is the aim of the individual and the aim of the group.

This simple statement of life and its meaning does not square with orthodox views or with the opinion of the majority. Majority opinion is more apt to reflect traditional precepts designed to subordinate the rights of the individual to the rights of the ruling order. The pursuit of happiness as the inalienable right of the individual may be accepted by most people *in principle*, but not in fact, since the satisfaction of the individual, or even of the group, is rarely regarded as an ultimate.

Least of all would such satisfaction appeal to one for whom the letter of the law and its fulfillment are of chief importance. To such a moralist there can be but one worthy objective for the individual, that of being good and useful. Goodness, for him, consists in obedience to existing institutions, usefulness in furthering the interests of these institutions. But obviously these institutions, whether social or political, cannot exist in their own right. They are not ultimates. They exist for the purpose of protecting individual rights and interests. Failing this, they are without justification and without significance. Thus, some other point of reference for goodness and usefulness must be found if they are to serve as adequate criteria of value. As presented by the moralist they beg the question. Good for what? Useful for what? Happiness would seem to be much more of an ultimate than goodness or usefulness. So far as we know, there isn't anything in particular we have to accomplish. The human race could scarcely exist for an ulterior purpose. If it were wiped out tomorrow, there could be no loss and no gain, unless it were the loss or gain of some other order of being.

Ecclesiastic tradition is even more opposed to a human and an individual-centered conception of values. The ecclesiast sees in the world of human events the acting out of a great drama. Behind the scenes of action he believes there is a larger reality, a more significant purpose, conceived by an infinite mind and working itself out according to a divine plan conceived before the foundations of the universe were laid. This idea has also intrigued certain philosophers, who feel that a purposeless universe would be inconceivable. Nature could not be merely the endless, meaningless, hurrying of material. If we could but penetrate beyond the world of visible events, the supreme and truly significant cause, they assure us, would become apparent.

The chief difficulty with this concept of transcendental cause is that it is without empirical evidence. Experience furnishes no basis upon which its validity may be either affirmed or denied. In the absence of such evidence it would appear more like an anthropomorphism than an account of actuality, more like a humanized projection than a true explanation. Thus, motive and purpose, being important attributes of human existence, also become properties of the universe as a whole. It is carrying this anthropomorphism a step further when it is supposed that not only does the physical universe share in the human experience of purpose, but, like the life of the individual, it has both beginning and end. This concept is even less tenable than the former, since it is contrary to one of our most important physical laws, namely, the law which states that matter and energy can neither be created nor destroyed. A true beginning or a true end with respect to physical substance has never been experienced. Something cannot come out of nothing, and what is something cannot become nothing. If out of nothing we could get something, we should have true creation. And if material elements could utterly vanish into nothingness, we should have true destruction and a true end, the nearest equivalent of which the ancients conceived to be destruction by fire. But even this, like other forms of apparent consumption, is only transformation.

THE BIOLOGICAL APPROACH

In the attitude of the moralist and the ecclesiast we have represented what we might call the transcendental approach. This approach is external and objective. It works on the assumption that morals and values are of divine origin, independent and superimposed. It conceives of purpose as a property, not merely of human life and conduct, but of the universe as a whole.

But there is another approach which is not external, and which makes no assumptions as to preexisting motives or independent values. This approach is the empirical and biological. It conceives of motive as a product of natural demand, and of value as altogether dependent upon this demand. We accept this approach because it is consistent with experience, and consistent with the facts we have outlined. The mystic and transcendental approach we believe to be as futile in the moral sphere as it is in the scientific. We cannot hope to discover motive or value somewhere out in space. They must be sought at their seat of expression, and in connection with the conditions out of which they arise.

In adopting this attitude we have not denied the reality of purpose. Purpose exists. But, as we see it, it belongs to the living and not the non-living world. Back of the physical universe there may be an all-encompassing and all-guiding purpose. But if this is the case we have no way of knowing it. It is only in the capacity of the individual for directed and controlled behavior that we have any experience of purpose.

Nor are we, in accepting the biological approach, denying the reality of mental and spiritual values. Tracing values to a biological source does not mean that all values must be physical. There are values which would seem to hold no relation to the physical. But would the recognition of this necessarily imply that they are of an utterly distinct and different character? Might it not be, as observed in an earlier chapter, that mental and spiritual values are only the bodily and physical more diluted and rarefied? The so-called higher values, as we see them, inhere in activities which are merely incomplete, implicit, and derived. Like all other values the spiritual must be grounded in nature and its needs. We may seek these values and know their supreme and lasting qualities. But in their attainment we have not escaped the physical. Through intense cultivation of the spiritual we cannot, as some would have us think, become so refined as to lose all contact with the physical. In the last analysis, our mental life must be an expression of our physical life. With the latter it is so intimately linked through the organs and structures upon which it depends, as to have no known existence apart from these.

A philosophy of life based upon empirical and biological concepts must accept happiness or the satisfaction of the individual as the ultimate point of reference in all questions of value. It is satisfaction that we seek, and it is toward its increase that our culture and civilization must be directed. A culture which does not have this as its aim is obviously misdirected.

But if happiness is the point of reference in values, it must also become the point of reference in morals. With the empirical approach, morals, like values, become relative; relative to the needs of the individual and the group, and relative to the requirements of the surroundings. They cease to be absolute or eternal essences, and become human, local, and temporal. Whatever increases human happiness becomes right; whatever interferes with it becomes wrong. Accepting this, rules of conduct will no longer command our obedience unless they further the end for which they are instituted. They may be necessary, and particularly so in a society in which determination of proper conduct cannot be left to the discretion of the individual. The masses cannot think for themselves, cannot know when they meet with the exception, or when obedience to the rule can only defeat the purpose of the rule. For the great majority there can be but one morality, the morality of law and commandment.

But there is a higher morality which consists, not in abject obedience to a set of rules, but solely in obedience to the principle upon which these rules are founded. In recognizing this principle of morality there is a new freedom. In observing it, and it alone, man becomes more nearly the master of his own conduct, guiding his acts according to his needs and the needs of his fellows, and aware that morals are made to serve him and not to enslave him. For one governed by such a morality the qualities of valor, of virtue, and of righteousness may be as real as ever. However, they will not consist in observance of rule or precept, but in the will to further the common good, in acts of kindness, in meeting need, in pulling the ass out of the pit though it be the Sabbath, in telling the truth when this serves the best interests, and in realizing that an act which under given conditions may be right under other conditions may be just as wrong. In this new freedom he may glory, concerned only for the goal of conduct, and aware that virtue is virtue and valor is valor only when the consequences of the act are considered.

LIFE AND ITS FULFILLMENT

Current interest in the problem of values has been much enlivened since the publication of R. B. Perry's "General Theory Of Value." Discussion has centered about his statement that the realm of values coincides with the realm of interest, and that value is not to be identified with the object, although, in a generic sense, it would seem to attach to all objects which are objects of interest.

To this general statement there can be no special objection. Apart from the ability to arouse interest there can be no value. We differ with Perry only in the desire to carry his analysis a step further, in tracing value, not to interest, but to the basis of interest, to human nature and its needs.

But Perry and his commentators ask a further question which is of first importance in its bearing upon the biological approach. If value is not in the object, is it in the *interest* aroused by the object, or is it in the *pleasure* to be derived from the object as an instrument? Or, to state it otherwise, does value consist in the stimulation and exercise of interest, or does it consist in the fulfillment and satisfaction of interest? What Perry would seem to imply is that we must accept one or the other of these alternatives. Either we accept interest and desire as valuable, or we embrace an outright hedonism, that is, we accept pleasure as the thing to be desired.

Now, we see no reason why we should be forced into choosing between these alternatives, or why we should attempt a dissection of life with the idea of identifying value with a part of life. The complete life cannot consist in a phase of its expression. Interest apart from the promise of satisfaction would be non-existent. If one could not envisage the hour of possible attainment, there would be no seeking. The values which attach to a drive are not merely those of interest or of appetite, nor merely those of satisfaction or satiety, but belong to all of these.

On the other hand, if the question becomes one of *relative* value, our emphasis would be on the first—on the arousal of desire and the stirring of interest, rather than upon the pleasure of attainment. Life is not in having. It is not a form of possession. It is in seeking, in doing, and achieving. The satisfactions which belong to possession are brief and wan as compared with those of ardent pursuit and endeavor. The pursuit itself may have value though its object is never attained. In fact, too often value disappears—vanishes—with the attainment of the goal. It would seem to recede, to flee to the future, to diminish with the ease of attainment and with the security with which it is held. To know the fullness of life, says Browning, our reach must ever exceed our grasp.

The significance of this fact cannot be too much stressed in a day when leisure is abundant and when objects of desire are easy to obtain. Under these conditions the individual is too apt to lose sight of the fact that he cannot seek satisfaction or pleasure directly. The conscious and deliberate pursuit of pleasure can only end in disillusionment. Appetites are dulled, and life loses its edge. "It is," as Huxley reminds us, "when a man is able to do what he likes that his worst difficulties begin." For then, to his surprise, he may discover that there isn't anything he really likes, there isn't anything he really cares to do.

The greatest satisfaction may be known only under the influence of need, only under the spur of want sharpened by the absence of too direct or immediate satisfaction. As such it belongs neither to the libertine nor to the ascetic, neither to too direct release nor to too rigid restraint, but to a balanced form of living in which we are obedient to the laws of nature and the requirements of our constitution.

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